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U.S. DEPARTMENT OF COMMERCE/National Bureau of Standards

Standard Reference Materials:
**Compilation of Elemental Concentration
Data for NBS Clinical, Biological,
Geological, and Environmental
Standard Reference Materials**

E. S. Gladney, B. T. O'Malley, I. Roelandts, and T. E. Gills

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²Some divisions within the center are located at Boulder, CO 80303.

³Located at Boulder, CO, with some elements at Gaithersburg, MD

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PREFACE

Standard Reference Materials (SRMs) as defined by the National Bureau of Standards are "well-characterized materials, produced in quantity, that calibrate a measurement system to assure compatibility of measurement in the Nation." SRMs are widely used as primary standards in many diverse fields of science, industry and technology, both within the United States and throughout the world. For many of the Nation's scientists and technologists it is of more than passing interest to know the measurements obtained and methods used by the analytical community when analyzing SRMs. An NBS series of papers, of which this publication is a member, is called the "NBS Special Publication - 260 Series" is reserved for this purpose.

This 260 Series is dedicated to the dissemination of elemental concentration data for NBS clinical, biological, geological, and environmental SRMs. More information will be found in this 260 than is generally found in NBS Certificates of Analysis. This 260 enables the user of these SRMs to assess the validity of data not available in the certificate of analysis. We hope that this 260 will provide sufficient additional information so that new application of these SRMs may be sought and found.

Inquires concerning the technical content of this compilation should be directed to the authors. Other questions concerned with the availability, delivery, or price of specific SRMs should be addressed to:

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Gaithersburg, MD 20899

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Compilation of Elemental Concentration Data for NBS Clinical, Biological, Geological, and Environmental
Standard Reference Materials

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Concentration data on as many as 92 constituents in 166 NBS Standard Reference Materials have been collected from over 1500 journal articles and technical reports. These data are summarized in consensus (mean) values with uncertainties expressed as \pm one standard deviation and compared with all available certification data from NBS. Data are presented on the analytical procedures employed and all raw data are given in the tables. This compilation is a successor to NBS Special Publication 260-88.

Key words: Analytical methods, biological, certified, clinical, compilation, consensus values, environmental, geological, informational values, literature values, mean values, Standard Reference Materials, SRM.

DISCLAIMER

Certain commercial equipment, instruments, or materials are identified in this report to adequately specify the procedure used for data compilation. Such identification does not imply recommendation or endorsement by the National Bureau of Standards or the Department of Energy, nor does it imply that the materials or equipment identified are necessarily the best available for the purpose.

1. Introduction

This compilation is a revised, updated, and expanded version of the 1982 edition published as NBS Special Publication 260-88 in 1984 (1). It is produced in a "living manual" format with the intent that individual tables will be revised whenever sufficient new data have appeared in the literature. These revisions will be provided to all known holders of the manual.

The National Bureau of Standards (NBS) has produced nearly 200 Standard Reference Materials

(SRM's) for use in clinical, biological, geological, and environmental analytical chemistry. The basic goal of the SRM program is to provide homogeneous and stable materials of a variety of natural matrices, for use in technique development and in analytical quality assurance. The function of SRM's in the latter role has been well-documented in a series of publications by Taylor (2-5). Standard Reference Materials carry the full legal weight and authority of NBS and the U.S. Department of Commerce, as they have been specifically authorized by federal legislation.

The concentrations of as many as 44 constituents have been determined by NBS at one of two confidence levels in each SRM: certified values and non-certified or informational values. The former is the present best estimate of the true concentration of that constituent and is not expected to deviate from that concentration by more than the stated uncertainty. These certified concentrations are determined at NBS or with cooperating laboratories using either a definitive method, two or more independent methods, or reference methods. These methods and other certification criteria have been carefully defined by Uriano and Gravatt (6). Constituent concentrations that are labeled as non-certified or informational are those that NBS has not measured by a definitive method, a reference method, or two or more independent methods.

A limitation of many of these SRM's has been the restricted number of constituents that NBS can afford to certify in each material. Numerous investigators outside NBS have published concentration data on constituents in these reference materials. Although brief review articles on NBS SRM's occasionally appear in the literature (7,8), we believe that the user should have access to both the summarized "consensus" value or mean concentration value and all the data on which they were based. This philosophy has been the basis of most of our previous compilation efforts (9-18). Because abstracting services do not have a category "standard reference materials" and this label is rarely used in keyword indices published with articles, the widely scattered data in reports, articles, books, and conference proceedings have been collected only with difficulty.

Data compilations also provide a mechanism for quality assurance checks on agency or compiler's "certified" values. Consistent disagreement between the user community and a certifying agency should encourage the material's producer to carefully re-examine his certification measurements on the element(s) that are in dispute.

There has been continuing controversy among compilers concerning the determination and reporting of final compositional information on reference materials. Flanagan (19) has used "recommended", "average", and "magnitude" to characterize his "estimates" for major components and trace elements in United States Geological

Survey materials. Abbey (20,21) has coined the term "usable value" for some of his results and pioneered the "select Laboratories" approach for arriving at overall compositional information. Gladney and Goode (13) elected to report only "mean values" and associated standard deviations without further attempt to assess the varying quality of data determined by different analytical techniques. For the French geostandards (CRPG, ANRT) Roubault, et al. (22) have considered "recommended", "preferred", and "proposed" values depending upon the degree of confidence they felt could be attached to the data. Steele, et al. (23), have reported "recommended" values in the six NIMROC rock samples using some statistical methods. Gladney, et al. (15), chose the term "consensus values" to describe their mean values calculated for USGS rocks after judgemental and statistical eliminations of initial outliers. Lister (24) has examined other "robust" estimators which he believes provide better estimates of true concentrations than mean values. Flanagan (25) has used two-way analysis of variance to produce "best estimates of composition" on three recent USGS reference rock samples. Abbey and Rousseau (26) have debated the merits of "Pragmatism vs Rigour" as approaches to the resolution of "disparate" analytical data on four Canadian Iron-Formation reference samples. Lister (27) has used plotting of "S-distribution curves" in an attempt to more closely examine analytical data included in reference materials compilations. Abbey (28) has also recently examined the use of "robust" estimators and Flanagan (29) has recently reviewed the entire spectrum of approaches to composition determination in reference samples.

Approaches to value judgement of data quality or even the advisability of compiling reference materials data can be debated endlessly. The responsibility for the informed end use of these compiled data, regardless of who performed the compilation, lies with individual investigators. Each should read our methodology carefully and critically so that he may decide for himself its limitations. The values in the tables must not be used uncritically. All data behind our mean "consensus values" are presented in the succeeding table so that anyone may recalculate them to reflect his own experience whenever desired.

2. Data Compilation

A listing of the 167 SRM's included in this document is provided in Table I, along with the most recent certification date, the number of data points included in the present compilation, and the relative amount of this data which is new from the previous compilation. All NBS certified and informational values for these SRM's are reported in the individual data tables for ease of comparison. Certified values have uncertainties stated, while informational/uncertified values do not.

The 67 major journals in analytical chemistry, geology, petrology, geochemistry, and environmental science that have been surveyed are shown in Table II. Less comprehensive coverage of books and institutional reports for 1972-1985 has been achieved. More than 1500 different references containing original data on NBS materials have been located. All tables containing summarized data are numbered xxxx-1 while all individual data follow in the table numbered xxxx-2, where xxxx is the NBS SRM number of the material. These latter tables contain the individual data, uncertainties (where provided), references, and the analytical techniques used.

All individual data located were assembled using a VAX 11/730 minicomputer with a VAX-VMS (version 4.2) operating system, an RA-80 121 Mb fixed-media disc drive, three RL-02 10 Mb cartridge disc drives, the Common Data Dictionary (version 3.2) and VAX Datatrieve (version 3.2) software packages (all are registered trademarks of the Digital Equipment Corporation, Manard, Massachusetts). Datatrieve is an interactive data storage and maintenance software system that provides facilities for selective data retrieval, updating, sorting, formatting, and report generation with a minimum of programming overhead. Data were hand-entered into the system via terminal keyboard from copies of the original references. Details of our Datatrieve based data management system are published elsewhere (30).

Upon closing of the database for calculation and publication of the compiled data, all individual records were inspected for typographical errors in material name, element name, units, analytical methods, etc. Those identified were corrected using simple user-generated Datatrieve procedures. Data were then sorted by material,

then constituent, and finally units. This collection was inspected (via another user-generated Datatrieve procedure) to identify constituents within a given material that had two or more unit types for the same element. These were then corrected to the same set of units for each conflicting set found using another Datatrieve procedure. Data were resorted by material, constituent, and in ascending order of concentration within each constituent (this can be accomplished in a single operation within Datatrieve). This year, to conserve space, we have chosen to eliminate all reports of limit values (less-than and greater-than) from materials and elements where the data justify confidence in our ability to report a real consensus value. Some subjective criteria, as described by Abbey (21) were used to eliminate data on either end of the reported concentration spectrum that we judged to be clearly beyond the limits of acceptability. Following these eliminations (usually less than 1% of the total data), an initial mean and standard deviation were computed using all remaining data for a given constituent in each SRM. All data points now outside \pm two standard deviations from the initial mean were dropped and a revised mean and standard deviation recomputed. These final means and associated standard deviations are reported as our consensus values in Tables 1A-1 to 4355-1 for up to 92 constituents. The number of literature values used to calculate each final value is indicated in the tables. Where sufficient data exist, the median was also determined using all data other than "less-than" values.

The compiled data were again resorted by material, constituent, and groups of analytical methods. An iterative mean and standard deviation (using \pm 2s for first round eliminations) were calculated for groups of analytical methods which had sufficient data (i.e., instrumental thermal, instrumental epithermal, radiochemical thermal, radiochemical epithermal, general neutron activation, and delayed neutron methods were all combined into neutron activation; general, wave-length dispersive, and energy dispersive methods into X-ray fluorescence, etc.). These analytical method means and associated standard deviations are also included in the tables.

Mean values in the summary tables (xxxx-1 series) that are based upon less than three data points do not include standard deviations. In a few cases the reported data had such a wide range

as to render the mean value calculation meaningless. Such cases are reported as ranges only (no standard deviation specified). Additionally, there are a few elements where only upper limit data exist, and these are given as only limit values in the tables.

3. Discussion

Our consensus values for major and minor elements in some SRM's can be subjected to a test commonly used by geochemists. "Whole material" summations, similar to geochemists "whole rock" summations, can be calculated from elemental data when oxygen data are available, or the elements can be converted to stoichiometric oxides and then summed. The latter approach is inappropriate for coals, oils, biologicals, and non-silicate rocks where many elements are not present in oxide forms. Because we still have not located any reports of oxygen determination in any of the biological SRM's, the "whole material" summation test cannot yet be applied. There are sufficient oxygen data on three coals and two fly ash materials to attempt the "whole material" summation. It is important that all concentration data used are either on a "dry-weight" basis or that the hydrogen or bound and unbound water be included as individual items in constituents summed. For two silicate rock SRM's where insufficient oxygen data exist, major and minor elements have been converted to stoichiometric oxide forms and summed. In all cases, the uncertainties (where known) are propagated onto the final sum using standard statistical techniques. The results of these calculations are shown below in Table III. Summations of 99 - 101 % are considered a good indication that the major and minor element data are reasonably accurate and internally consistent. The material summations for NBS SRM's 278, 688, 1632A, 1633, 1633A, and 1635 meet this quality criteria, although the propagated uncertainty on the coals (1632A and 1635) are much larger than one would prefer. The summation for NBS SRM 1632 is over 2% lower than the previous compilation, due to a drop in the consensus value for oxygen. Since the two oxygen measurements located differ by a factor of 1.5, the uncertainty on this consensus value is quite high. In the future it is hoped that good oxygen data will be available so that this approach can be applied to a larger number of materials.

The growth of the body of SRM data since the last compilation is summarized in Table I. More details about the changing patterns in reference material measurements, their sources, the analytical techniques used, and the constituents measured were recently described by Gladney and Roelandts (31).

The key to analytical method codes (METHOD) is given in Table IV. The key to the COMMENT code is given in Table V. All data reported as oxides in the original references were converted to elemental form using the conversion factors shown in Table VI. The individual data (CONC), their uncertainties when provided (UNCER), analytical technique used (METHOD), and the individual references are given in Tables numbered xxxx-2 for each SRM. These tables were generated with user-written Datatrieve "procedures," the VAX Datatrieve report writing facilities and the DEC Keypad editor. All tables were printed on a Hewlett-Packard LaserJet printer. Data that were reported as "greater-than" values have been omitted entirely, and "less-than" values are shown as "<" under CONC and "L" under COMMENT. As mentioned above, less-than values that no longer offer any useful perspective on elements with well-established values have been dropped from the database to conserve space. The data have been sorted in ascending order based upon material, constituent, and concentration using VAX Datatrieve. All the references (CODE and NUM) have been identified in Reference Appendix. The CODE consists of the last two digits of the year of publication plus the first three letters of the first author's last name. The two digit numerical suffix (NUM) is provided to enable handling of multiple reports by the same first author in the same year. This particular reference coding system was adopted in preference to a sequential numbering system in 1980 to permit rapid searching of the reference database using Datatrieve, and to permit easy random updating of both the reference and concentration databases without the necessity of renumbering the references. Since over 4000 references with data on various NBS, United States Geological Survey (USGS), and Canadian Certified Reference Materials Project (CCRMP) materials are now in our system, these considerations are extremely important.

4. Conclusion

Although we have endeavored to achieve as wide a coverage of the literature as possible, we realize that this compilation is still incomplete. We appreciate the efforts of those investigators who have sent us their data directly, and we continue to request that the users of this compilation call our attention to omissions and errors so that they may be corrected in subsequent editions. Anyone with unpublished results or data published in "technical reports" that may not be widely circulated, on any NBS, USGS, or CCRMP reference materials are urged to send their data to the first author of this compilation and it will be placed in our database with appropriate reference to the source.

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CREDIT

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TABLE I: NATIONAL BUREAU OF STANDARDS BIOLOGICAL, ENVIRONMENTAL, AND GEOLOGICAL STANDARD REFERENCE MATERIALS

SRM Number	Name	Certification Date	# data (1986)	% New (1986)
1A	Argillaceous Limestone	1931	98	19
1b	Argillaceous Limestone	1966	77	32
1c	Argillaceous Limestone	1978	37	100
27F	Iron Ore (Sibley)	1977	1	100
56	Tennessee Phosphate Rock	1927	1	0
56B	Phosphate Rock (Tennessee Brown)	1947	3	0
69A	Bauxite	1951	81	44
69B	Bauxite (Arkansas)	1979	0	--
70	Feldspar	1926	24	0
70a	Feldspar	1981	64	22
76	Burnt Refractory	1955	10	0
76A	Burnt Refractory	1985	0	--
77	Burnt Refractory	1955	12	0
77A	Burnt Refractory	1985	0	--
78	Burnt Refractory	1955	2	0
78A	Burnt Refractory	1985	0	--
79A	Fluorspar	1971	1	100
80	Soda-Lime Glass	1927	2	0
81A	Glass Sand	1978	0	--
88	Dolomite	1928	14	21
88A	Dolomitic Limestone	1982	100	48
88B	Dolomitic Limestone	1986	0	--
91	Opal Glass	1931	54	20
92	Soda-Lime Glass Powder	1982	3	100
93A	Borosilicate Glass	1973	2	0
97	Flint Clay	1931	86	3
97A	Flint Clay	1969	64	22
98	Plastic Clay	1931	134	0
98A	Plastic Clay	1969	60	20
99	Soda Feldspar	1931	57	2
99A	Feldspar	1981	42	12
120A	Phosphate Rock (Florida)	1961	21	24
120B	Phosphate Rock (Florida)	1979	188	43
181	Lithium Ore (Spodumene)	1981	1	100
182	Lithium Ore (Petalite)	1981	0	--
183	Lithium Ore (Lepidolite)	1981	0	--
278	Obsidian Rock	1981	296	59
330	Copper Ore, Mill Heads	1977	0	--
331	Copper Ore, Mill Tails	1977	0	--
332	Copper Concentrate	1977	1	100
333	Molybdenum Concentrate	1977	0	--
470	Mineral Glasses for Microanalysis	1979	0	--
610	Trace Elements in Glass (500 ppm)	1972	126	72
612	Trace Elements in Glass (50 ppm)	1982	112	85
614	Trace Elements in Glass (1 ppm)	1982	81	84
616	Trace Elements in Glass (0.02 ppm)	1982	24	88

TABLE 1: NATIONAL BUREAU OF STANDARDS BIOLOGICAL, ENVIRONMENTAL, AND GEOLOGICAL STANDARD REFERENCE MATERIALS
(cont.)

SRM Number	Name	Certification Date	# data (1986)	% New (1986)
633	Portland Cement	1974	11	100
634	Portland Cement	1974	3	100
635	Portland Cement	1974	10	100
636	Portland Cement	1974	11	100
637	Portland Cement	1974	10	100
638	Portland Cement	1974	10	100
639	Portland Cement	1974	10	100
688	Basalt Rock	1981	255	76
694	Western Phosphate Rock	1984	0	--
696	Bauxite (Surinam)	1979	30	100
697	Bauxite (Dominican)	1979	0	--
698	Bauxite (Jamaican)	1979	33	100
909	Human Serum	1985	0	--
1083	Wear-Metals in Lubricating Oil	1985	0	--
1084	Wear-Metals in Lubridating Oil	1985	30	100
1085	Wear-Metals in Lubricating Oil	1985	27	100
1549	Non-Fat Milk Powder	1984	56	100
1566	Oyster Tissue	1983	425	77
1567	Wheat Flour	1978	317	55
1568	Rice Flour	1978	269	58
1569	Brewer's Yeast	1976	139	12
1570	Trace Elements in Spinach	1976	715	36
1571	Orchard Leaves	1977	3113	27
1572	Citrus Leaves	1982	139	89
1573	Tomato Leaves	1976	758	34
1575	Pine Needles	1976	664	34
1577	Bovine Liver	1977	2262	23
1577a	Bovine Liver	1982	216	100
1581A	PCBs in Oil	1982	0	--
1581B	PCBs in Oil	1982	0	--
1581C	PCBs in Oil	1982	0	--
1581D	PCBs in Oil	1982	0	--
1582	Petroleum Crude Oil	1984	8	100
1584	Priority Pollutant Phenols	1984	10	100
1585	Chlorinated Biphenyls	1986	0	--
1587	Nitrated Polycyclic Aromatic Hydrocarbons	1985	0	--
1590	Stabililzed Wine	1985	4	100
1614	Dioxin	1985	0	--

TABLE 1: NATIONAL BUREAU OF STANDARDS BIOLOGICAL, ENVIRONMENTAL, AND GEOLOGICAL STANDARD REFERENCE MATERIALS
(cont.)

SRM Number	Name	Certification Date	# data (1986)	% New (1986)
1618	Vanadium and Nickel in Residual Fuel Oil	1985	0	--
1619	Sulfur in Residual Fuel Oil	1981	18	100
1620	Sulfur in Residual Fuel Oil	1979	0	--
1620a	Sulfur in Residual Fuel Oil	1981	19	100
1621	Sulfur in Residual Fuel Oil	1967	5	20
1621a	Sulfur in Residual Fuel Oil	1980	7	14
1621b	Sulfur in Residual Fuel Oil	1981	7	100
1622	Sulfur in Residual Fuel Oil	1967	2	100
1622a	Sulfur in Residual Fuel Oil	1979	5	20
1622b	Sulfur in Residual Fuel Oil	1981	7	100
1622c	Sulfur in Residual Fuel Oil	1986	0	--
1623	Sulfur in Residual Fuel Oil	1971	4	0
1623a	Sulfur in Residual Fuel Oil	1981	6	100
1624	Sulfur in Distillate Fuel Oil	1971	4	0
1624a	Sulfur in Distillate (Diesel) Fuel Oil	1981	6	100
1630	Trace Mercury in Coal	1971	72	4
1631A	Sulfur in Coal	1974	8	50
1631B	Sulfur in Coal	1974	6	33
1631C	Sulfur in Coal	1974	7	43
1632	Trace Elements in Coal	1974	1810	16
1632A	Trace Elements in Coal (Bituminous)	1983	952	51
1632B	Trace Elements in Coal (Bituminous)	1985	0	--
1633	Trace Elements in Coal Fly Ash	1975	2057	13
1633A	Trace Elements in Coal Fly Ash	1985	850	60
1634	Trace Elements in Fuel Oil	1975	138	17
1634A	Trace Elements in Fuel Oil	1982	95	100
1634B	Trace Elements in Fuel Oil	1986	0	--
1635	Trace Elements in Coal (Subbituminous)	1979	454	46
1639	Halocarbons for Water Analysis	1983	0	--
1641	Mercury in Water - Concentrate	1975	1	0
1641A	Mercury in Water - ug/mL	1978	0	--
1641B	Mercury in Water - ug/mL	1983	1	100
1642	Mercury in Water - Trace	1974	0	--
1642A	Mercury in Water - ng/mL	1977	4	75
1642B	Mercury in Water - ng/mL	1982	2	100
1643	Trace Elements in Water	1977	132	61
1643A	Trace Elements in Water	1980	313	88
1643B	Trace Elements in Water	1984	29	100
1645	River Sediment	1982	524	64
1646	Estuarine Sediment	1982	173	98
1647	Priority Pollutant Polynuclear Aromatic Hydrocarbons	1981	13	100
1648	Urban Particulate Matter	1982	371	33
1649	Urban Dust/Organics	1982	64	64

TABLE 1: NATIONAL BUREAU OF STANDARDS BIOLOGICAL, ENVIRONMENTAL, AND GEOLOGICAL STANDARD REFERENCE MATERIALS
(cont.)

SRM Number	Name	Certification Date	# data (1986)	% New (1986)
1818	Total Chlorine in Lubricating Base Oil	1986	0	--
1819	Sulfur in Lubricating Base Oil	1985	0	--
1880	Portland Cement	1984	0	--
1881	Portland Cement	1984	0	--
2661	Benzene on Charcoal	1977	0	--
2661A	Benzene on Charcoal	1978	2	100
2662	m-Xylene on Charcoal	1977	0	--
2663	p-Dioxane on Charcoal	1977	1	100
2664	1,2-Dichloroethane on Charcoal	1977	2	100
2665	Chloroform on Charcoal	1977	1	100
2666	Trichloroethylene on Charcoal	1977	1	100
2667	Carbon tetrachloride on Charcoal	1977	1	100
2670	Toxic Metals in Freeze-Dried Urine	1985	17	100
2671	Freeze Dried Urine Certified for Fluorine	1975	0	--
2672	Freeze-Dried Urine Certified for Mercury	1975	3	100
2674	Lead on Filter Media	1979	0	--
2675	Beryllium on Filter Media	1975	1	100
2676	Metals on Filter Media	1975	0	--
2676A	Metals on Filter Media	1978	9	100
2676B	Metals on Filter Media	1983	0	--
2677	Beryllium and Arsenic on Filter Media	1985	0	--
2679	Quartz on Filter Media	1976	0	--
2682	Sulfur in Coal	1983	75	100
2683	Sulfur in Coal	1983	67	100
2684	Sulfur in Coal	1983	67	100
2685	Sulfur in Coal	1983	67	100
2689	Coal Fly Ash	1986	0	--
2690	Coal Fly Ash	1986	0	--
2691	Coal Fly Ash	1986	0	--
2694	Simulated Rainwater	1986	0	--
4350	Environmental Radioactivity Standard: River Sediment	1975	12	67
4350B	Environmental Radioactivity: River Sediment	1981	23	74
4351	Environmental Radioactivity: Human Lung	1982	0	--
4352	Environmental Radioactivity: Human Liver	1982	0	--
4353	Environmental Radioactivity: Rocky Flats Soil #1	1981	28	82
4355	Environmental Radioactivity: Peruvian Soil	1982	0	--
8412	Corn (Zea Mays) Stalk	1986	0	--
8413	Corn (Zea Mays) Kernel	1986	0	--
8419	Bovine Serum	1985	84	100
8431	Mixed Diet	1986	0	--

TABLE II: LITERATURE SURVEYED

Journal	Vol. #	# data	% total
Acta Chimica Hungarica	113 - 119	0	---
Acta Chimica Scandinavia	39A, 39B	0	---
American Laboratory	11 - 17	132	0.6
American Mineralogist	67 - 70	0	---
Analusis	1 - 13	128	0.6
Analyst	97 - 110	922	4.6
Analytica Chimica Acta	53 - 178	1115	5.5
Analytical Chemistry	44 - 57	3574	17.7
Analytical Instrumentation	13 - 14	0	---
Analytical Letters	1 - 18	97	0.5
Annales de la Societe Geologique de Belgique	91 - 108	0	---
Applied Spectroscopy	25 - 39	265	1.3
Atomic Absorption Newsletter	1 - 18	111	0.6
Atomic Spectrometry	1 - 6	169	0.8
Biological Trace Element Research	1 - 8	31	0.2
Bulletin des Societes Chimiques Belges	80 - 94	3	<0.1
Bunseki Kagaku	24 - 34	966	4.8
Canadian Journal of Earth Sciences	9 - 22	20	0.1
Canadian Journal of Spectroscopy	20 - 30	59	0.3
Chemical Geology	13 - 53	108	0.5
Comptes-Rendus Hebdomadaires des Seances de l'Academie des Sciences (Paris)	272 - 301	1	<0.1
Conference Proceedings	---	1523	7.6
Contributions to Mineralogy and Petrology	36 - 91	10	<0.1
Earth and Planetary Science Letters	1 - 77	15	<0.1
Economic Geology	67 - 80	0	---
Environmental Geology	1 - 5	9	<0.1
Environmental Letters	1 - 10	13	<0.1
Environmental Pollution	29A - 39A 1B - 10B	22	0.1
Environmental Research	1 - 38	4	<0.1
Environmental Science and Technology	5 - 19	469	2.3
Fresenius Zeitschrift fur Analytische Chemie	244 - 322	589	2.9
Geochemistry International (trans. from Geokhimiya)	9 - 22	0	---
Geophysical Research Letters	1 - 7	25	0.1
Geochimica et Cosmochimica Acta	36 - 49	169	0.8
Geostandards Newsletter	1 - 9	1146	5.7
Geotechnical Testing Journal	1 - 7	0	---
Geochemical Journal	7 - 19	6	<0.1
International Journal of Applied Radiation and Isotopes	23 - 36	14	<0.1
International Journal of Environmental Analytical Chemistry	1 - 23	161	0.8
International Journal of Environmental Studies	1 - 25	9	<0.1
Journal of Analytical Chemistry of USSR (trans. of Zhurnal Analiticheskoi Khimii)	26 - 38	0	---
Journal of Environmental Quality	1 - 14	14	<0.1
Journal of Environmental Radioactivity	1 - 3	0	---
Journal of Environmental Science and Health	11 - 20	79	0.4
Journal of Geochemical Exploration	1 - 24	0	---
Journal of Petrology	12 - 26	0	---

TABLE II: LITERATURE SURVEYED (cont.)

Journal	Vol. #	# data	% total
Journal of Radioanalytical and Nuclear Chemistry	10 - 96	2436	12.1
Journal of Research of the USGS	1 - 6	25	0.1
Journal of the Association of Official Analytical Chemists	55 - 68	734	3.6
Journal of the Geological Society (London)	127 - 142	0	---
Journal of the Soil Science Society of America	46 - 48	2	<0.1
Journal of the South African Chemical Institute	21 - 37	0	---
Journal of Volcanology and Geothermal Research	1 - 26	0	---
Lithos	4 - 18	0	---
Marine Geology	12 - 44	0	---
Mass Spectroscopy	31 - 32	0	---
Microchemical Journal	17 - 28	3	<0.1
Mikrochimica Acta (Wien)	1972 - 1984	98	0.5
Mineralogy Magazine	40 - 44	0	---
Nuclear Instruments and Methods	114 - 172	268	1.3
Precambrian Research	1 - 14	2	<0.1
Private (Written) Communication	---	278	1.4
Radiochimica Acta	17 - 38	0	---
Radiochemical and Radioanalytical Letters	1 - 59	468	2.3
Reports and Books	---	2617	13.0
Sedimentology	16 - 28	0	---
Spectrochimica Acta	27B - 40B	423	2.1
Spectroscopy Letters	17 - 18	0	---
Talanta	19 - 32	238	1.2
X-ray Spectrometry	1 - 14	179	0.9
Misc. sources	---	364	
Total	---	20113	100.0

TABLE III: WHOLE MATERIAL CONCENTRATION SUMMATIONS OF MAJOR AND MINOR ELEMENTS FOR SELECTED NBS SRMs (%)

	1633	1633A	1632	1632A	1635
ELE	CONSENSUS Mean \pm SD	CONSENSUS Mean \pm SD	CONSENSUS Mean \pm SD	CONSENSUS Mean \pm SD	CONSENSUS Mean \pm SD
Al	12.6 \pm 0.6	14.4 \pm 0.7	1.73 \pm 0.10	2.95 \pm 0.10	0.295 \pm 0.027
Ba	0.266 \pm 0.016	0.142 \pm 0.010	---	---	---
C	3.3 \pm 0.2	---	70.6 \pm 1.7	64.4 \pm 3.9	62.6
Ca	4.65 \pm 0.34	1.14 \pm 0.06	0.418 \pm 0.042	0.241 \pm 0.017	0.535 \pm 0.034
Fe	6.16 \pm 0.27	9.37 \pm 0.23	0.851 \pm 0.044	1.11 \pm 0.03	0.229 \pm 0.006
H	0.02	0.04	4.29 \pm 0.22	4.1 \pm 0.4	4.07
K	1.69 \pm 0.09	1.88 \pm 0.05	0.278 \pm 0.017	0.411 \pm 0.02	---
Mg	1.5 \pm 0.3	0.457 \pm 0.045	0.156 \pm 0.041	0.115 \pm 0.02	0.104 \pm 0.013
N	---	---	1.20 \pm 0.14	1.25 \pm 0.04	1.16 \pm 0.32
Na	0.3130 \pm 0.02	0.173 \pm 0.011	---	---	0.239 \pm 0.020
O	47.02	47.66	12.6	18.8 \pm 0.8	30 \pm 8
P	0.101 \pm 0.018	0.169 \pm 0.024	---	---	---
S	0.450 \pm 0.050	0.190 \pm 0.070	1.32 \pm 0.08	1.55 \pm 0.05	0.336 \pm 0.024
Si	22.0 \pm 1.0	23.0 \pm 0.9	3.08 \pm 0.24	5.87 \pm 0.22	0.590 \pm 0.050
Sr	0.138 \pm 0.010	---	---	---	---
Ti	0.710 \pm 0.050	0.823 \pm 0.039	---	0.163 \pm 0.01	---
Other	0.33	0.39	0.33	0.27	0.01
Total	101.25 \pm 1.3	99.83 \pm 1.17	96.85 \pm 1.74	101.23 \pm 4.01	100.2 \pm 8.1

	278	688
OXIDE	CONSENSUS Mean \pm SD	CONSENSUS Mean \pm SD
Al ₂ O ₃	14.39 \pm 0.25	17.33 \pm 0.30
BaO	0.11 \pm 0.01	---
CO ₂	0.18	0.05
CaO	1.00 \pm 0.02	11.85 \pm 0.50
Fe ₂ O ₃	0.49	1.8
FeO ⁺	1.38	7.645
H ₂ O ⁺	0.30	0.14
H ₂ O ⁻	0.05	0.11
K ₂ O	4.07 \pm 0.12	0.19 \pm 0.01
MgO	0.25	8.72 \pm 0.36
MnO	0.05 \pm 0.01	0.16 \pm 0.01
Na ₂ O	4.72 \pm 0.05	2.09 \pm 0.11
P ₂ O ₅	0.03	0.16 \pm 0.05
SiO ₂	71.52 \pm 1.28	48.22 \pm 0.32
TiO ₂	0.24 \pm 0.01	1.18 \pm 0.03
Other	0.16	0.17
Total	98.98 \pm 1.31	99.82 \pm 0.77

TABLE IV: ANALYTICAL METHOD CODES FOR INDIVIDUAL DATA TABLES

Code	Specific Technique	Code	Specific Technique
14NAA	14 MeV Neutron Activation Analysis	GRAV	Gravimetry
AA	General, Flame Atomic Absorption: Unspecified, or Mixed Conditions	HAA	Hydride Evolution Atomic Absorption
AAC	Flame Atomic Absorption Preceded by Chemical Separation	I	Infrared
ABS	Absorption (69FLA 01)	IC	Ion Chromatography
AE+AF	Atomic Emission + Atomic Fluorescence	ICPAF	Inductively Coupled Plasma Atomic Fluorescence
AF	Atomic Fluorescence	ICPES	Inductively Coupled Plasma Atomic Emission Spectrometry
AS	Alpha Spectrometry	ICPMS	Inductively Coupled Plasma Mass Spectrometry
ASV	Anodic Stripping Voltammetry	IDMS	Isotope Dilution Mass Spectrometry
CALC	Calculated	IE	Ion Exchange (76FLA 04)
CB	Combustion: Elemental Analyzer	IENA	Instrumental Epithermal Neutron Activation
CB-GC	Combustion + Gas Chromatography	ISE	Ion Selective Electrodes
CHEM	Chemical (taken from several other compilers, usually undefined)	ITNA	Instrumental Thermal Neutron Activation
CHEML	Chemiluminescence, Candoluminescence	KF	Karl Fischer Method for H_2O
CHROM	Chromatographic	LC	Liquid Chromatography (reversed or normal phase)
COLOR	Colorimetry, Photometry, Spectrophotometry	MECA	Molecular Emission Cavity Analysis
CONV	Conventional (taken from several other compilers, usually undefined)	MOSS	Mossbauer Spectroscopy
COUL	Coulometry	MPOES	Microwave Plasma Optical Emission Spectrometry
CPAA	Charged Particle Activation Analysis	MS	General Mass Spectrometry
CPXRF	Charged Particle Induced X-ray Fluorescence	NAA	Neutron Activation Analysis: General, unspecified, or mixed conditions
CSV	Cathodic Stripping Voltammetry	NM	Nuclear Methods (general)
CVAA	Cold Vapor Atomic Absorption	NT	Nuclear Track
DCPES	Direct Coupled Plasma Atomic Emission Spectrometry	OES	General, DC Arc Optical Emission Spectrometry
DNA	Delayed Neutron Activation Analysis	PAA	Photon Activation or X-ray Activation Analysis
ESCA	Electron Spectroscopy for Chemical Applications	PC	Paper Chromatography
ESR	Electron Spin Resonance	PEN	Penfield Method (H_2O)
EXRF	Energy Dispersive X-ray Fluorescence	POL	Polarography
FA	Fire Assay	POT	Potentiometry (69FLA 01, 69FLE 01)
FA-AA	Fire Assay-Atomic Absorption	PM	Petrographic Microscope
FA-OS	Fire Assay-Optical Emission Spectrometry	PROBE	Ion or Electron Microprobe Mass Analyzer
FAA	Flameless Atomic Absorption (Electrothermal, Carbon Rod)	PYHYD	Pyrohydrolysis
FAAC	Flameless Atomic Absorption Preceded by Chemical Separation	RENA	Radiochemical Epithermal Neutron Activation
FAE	Flameless Atomic Emission	RR	Rapid rock
FD	Freeze Drying	RTNA	Radiochemical Thermal Neutron Activation
FE	Flame Emission, Flame Photometry, Atomic Emission	SIMS	Secondary Ion Mass Spectrometry
FLUOR	Fluorometry	SM	Semi-micro (69FLE 01)
GAMMA	Direct Gamma-ray Counting (without activation)	SSMS	Spark-source Mass Spectrometry
GC	Gas Chromatography	TC	Thermal Conductivity
GC-AA	Gas Chromatography-Atomic Absorption Spectrometry	TCGS	Thermal Neutron Capture Prompt Gamma-ray Spectrometry
GC-MS	Gas Chromatography-Mass Spectrometry	TITR	Titrimetry
GCMS	Gas Chromatography Microwave Emission	TURB	Turbidimetry
GE	Gas Evolution (CO_2 in rocks)	UU	Unspecified
		VOLT	Voltammetry (76FLA 04)
		VOLU	Volumetry (76FLA 04)
		VV	Various, Mixed Methods
		WXRF	Wavelength Dispersive X-ray Fluorescence
		XRF	General or Unspecified X-ray Fluorescence

TABLE V: COMMENT Codes for Individual Data Tables

Code	Definition
*	Data eliminated from all mean value calculations.
D	Same data reported in two or more references. Duplicate data are flagged and oldest reference used in mean calculations.
H	Hydride generation
L	Limit (less than) data. Not used in computations.
R	Concentration range. Not used in computations.
1	Different nebulizers used for independent results.
2	V ₂ O ₅ catalyst used in dissolution.
3	Different electrodes used for independent results.
4	Aqueous slurry of reground sample.
5	Different radioactive isotopes or irradiation conditions used for independent results.
6	Different methods of standardization used for independent results.
7	Different chemical separation methods used for independent results.
8	Isotope dilution methods combined with spark source mass spectrometry.
9	Gamma-gamma coincidence.
10	Different neutron filters used for independent results by epithermal neutron activation analysis.
11	Different dissolution or matrix destruction methods used for independent results.
12	Different methods of peak integration or dead time correction used for independent results.
13	Different detectors used for independent results.
14	Different furnace configurations used for independent results.
15	Different laboratories prepared fused beads used for independent results.
16	Different matrix correction methods used for independent results.
17	Different laboratories or analysts reporting independent results in same reference.
18	Different bottles of reference material used for independent results.
19	Duplicate entries from same reference from previous data compilation assembled by another compiler; reason for duplication unknown.
20	Different emission/absorption lines used for independent results.
21	Dichromate used for FEO determination (76FLA 04).
22	Vanadate used for FEO determination (76FLA 04).
23	Modified Penfield method used for H ₂ O ⁺ determination.
24	Different irradiation containers used for independent results.
25	Different colorimetric methods used for independent results.
26	CONC and UNCER should be multiplied by 10(-5).
28	CONC and UNCER should be multiplied by 10(-3).
30	Results were used by NBS to determine certified values.
31	Different chemical methods used for independent results.
32	Different background correction or excitation sources or crystals used for independent results by XRF.
33	Different pellet sizes used for independent results.
34	Reported on a dry weight basis.
35	Reported on an as-received basis.
36	OES pre-ignition at various temperatures for independent results.
37	Karl Fischer titration for H ₂ O.
38	CONC and UNCER are X10(9), A/G=atoms/gram
40	Different gamma-rays from the same isotope used for independent results.
41	Acid evolution method for CO ₂ determination.
44	Different conditions employed for independent results by Liquid Chromatography.

TABLE VI: Factors Used for Oxide to Element Conversions

Oxide	Multiplier	Oxide	Multiplier
Al_2O_3	0.529	Mn_2O_3	0.696
B_2O_3	0.311	Mn_3O_4	0.720
BaO	0.896	MoO_3	0.667
BeO	0.360	Na_2O	0.742
CO_2	0.273	Nd_2O_3	0.857
CaO	0.715	NiO	0.786
CdO	0.875	P_2O_5	0.436
CoO	0.786	PbO	0.928
Cr_2O_3	0.684	Rb_2O	0.914
Cs_2O	0.943	SiO_2	0.467
CuO	0.799	SO_3	0.400
$\text{FeO to Fe}_2\text{O}_3$	1.112	Sc_2O_3	0.652
FeO	0.777	SrO	0.846
Fe_2O_3	0.699	TiO_2	0.599
Ga_2O_3	0.592	U_3O_8	0.848
K_2O	0.830	V_2O_5	0.560
La_2O_3	0.853	Y_2O_3	0.787
Li_2O	0.465	ZnO	0.803
MgO	0.603	ZrO_2	0.740
MnO	0.774		

TABLE 1A-1: COMPILED DATA FOR NBS SRM 1A ARGILLACEOUS LIMESTONE (revised 3/1/86)

ELE	UNITS	NBS Mean	CONSENSUS		MEDIAN	RANGE	XRF Mean	OES		OTHER METHODS		
			Mean \pm SD	(n)				Mean \pm SD	(n)	Mean \pm SD	(n)	Method
Al	%	2.2	2.23 \pm 0.08	(7)	2.23	2.1 - 2.36	---	2.16	(2)	2.18	(2)	COLOR
Al	%	---	---	---	---	---	---	---	---	2.36	(1)	RR
Al	%	---	---	---	---	---	---	---	---	2.29	(1)	TITR
Al	%	---	---	---	---	---	---	---	---	2.27	(1)	DCPES
As	ug/g	---	1.6	(1)	---	---	---	---	---	1.6	(1)	AA
B	ug/g	---	90	(2)	---	80 - 100	---	90	(2)	---	---	---
Ba	ug/g	---	< 800	---	---	---	---	< 800	---	---	---	---
Be	ng/g	---	670	(1)	---	---	---	---	---	670	(1)	AA
Bi	ng/g	---	57	(1)	---	---	---	---	---	57	(1)	AA
C-I	%	9.15	9.05 \pm 0.20	(3)	9.16	8.82 - 9.17	---	---	---	9.05 \pm 0.20	(3)	COUL
C-O	ug/g	6100	5600	(1)	---	---	---	---	---	5600	(1)	CALC
C-T	%	---	9.72	(2)	---	9.72 - 9.73	---	---	---	9.72	(1)	COUL
C-T	%	---	---	---	---	---	---	---	---	9.73	(1)	CB
Ca	%	29.54	29.6 \pm 0.1	(3)	29.6	29.5 - 29.7	29.6 (1)	---	---	29.7	(1)	DCPES
Ca	%	---	---	---	---	---	---	---	---	29.5	(1)	RR
Cd	ng/g	---	32	(1)	---	---	---	---	---	32	(1)	AA
Co	ug/g	---	3.9	(1)	---	---	---	---	---	3.9	(1)	NAA
Cr	ug/g	---	26.5	(2)	---	23 - 30	---	30	(1)	23	(1)	NAA
Cu	ug/g	---	3	(1)	---	---	---	3	(1)	---	---	---
Fe	%	1.14	1.11 \pm 0.03	(5)	1.1	1.08 - 1.15	---	1.08	(1)	1.1	(1)	COLOR
Fe	%	---	---	---	---	---	---	---	---	1.08	(1)	DCPES
Fe	%	---	---	---	---	---	---	---	---	1.15	(1)	TITR
Fe	%	---	---	---	---	---	---	---	---	1.13	(1)	RR
Ga	ug/g	---	4	(1)	---	---	---	4	(1)	---	---	---
Hg	ng/g	---	57.7	(2)	---	44 - 71.4	---	---	---	57.7	(2)	AA
K	ug/g	5900	6900	(1)	---	---	---	---	---	6900	(1)	RR
La	ug/g	---	100	(1)	---	---	---	100	(1)	---	---	---
LOI	%	34.55	---	---	---	---	---	---	---	---	---	---
Mg	%	1.32	1.34 \pm 0.05	(4)	1.3	1.29 - 1.39	---	1.30	(2)	1.39	(1)	DCPES
Mg	%	---	---	---	---	---	---	---	---	1.37	(1)	RR
Mn	ug/g	290	440 \pm 100	(3)	500	320 - 500	---	440 \pm 100	(3)	---	---	---
Mo	ug/g	---	< 1	---	---	---	---	< 1	---	---	---	---
Na	ug/g	2890	2500	(2)	---	2300 - 2700	---	---	---	2700	(1)	DCPES
Na	ug/g	---	---	---	---	---	---	---	---	2300	(1)	RR
Ni	ug/g	---	10	(1)	---	---	---	10	(1)	---	---	---
P	ug/g	650	1075	(2)	---	650 - 1500	650 (1)	1500	(1)	---	---	---
Pb	ug/g	---	19.3 \pm 1.6	(4)	19.1	17.2 - 21	---	20	(1)	19.1 \pm 1.9	(3)	AA
S	ug/g	2500	2850 \pm 160	(8)	2800	2620 - 3073	---	2800	(1)	2840 \pm 200	(5)	CB
S	ug/g	---	---	---	---	---	---	---	---	3000	(1)	TURB
Sb	ng/g	---	630	(1)	---	---	---	---	---	630	(1)	AA
Sc	ug/g	---	15	(1)	---	---	---	15	(1)	---	---	---
Si	%	6.59	6.60 \pm 0.08	(5)	6.58	6.53 - 6.72	6.53 (1)	6.54	(1)	6.63	(1)	COLOR
Si	%	---	---	---	---	---	---	---	---	6.58	(1)	RR
Si	%	---	---	---	---	---	---	---	---	6.72	(1)	DCPES
Sn	ug/g	---	2.13	(2)	---	1.68 - 2.58	---	---	---	2.13	(2)	AA
Sr	ug/g	1950	1910 \pm 140	(4)	1940	1700 - 2000	---	1880 \pm 160	(3)	2000	(1)	NAA
Ti	ug/g	960	940 \pm 50	(4)	960	900 - 1000	---	1250	(2)	900	(1)	DCPES
Ti	ug/g	---	---	---	---	---	---	---	---	960	(1)	NAA
Ti	ug/g	---	---	---	---	---	---	---	---	900	(1)	RR
U	ug/g	---	156	(1)	---	---	---	---	---	156	(1)	ICPES
V	ug/g	---	30	(1)	---	---	---	30	(1)	---	---	---
Y	ug/g	---	10	(1)	---	---	---	10	(1)	---	---	---
Zn	ug/g	---	20.15	(2)	---	17 - 23.3	17 (1)	---	---	23.3	(1)	NAA
Zr	ug/g	---	60	(1)	---	---	---	60	(1)	---	---	---

TABLE 1A-2: INDIVIDUAL DATA FOR NBS SRM 1A (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Al (%)</u>					<u>Cd (ng/g)</u>				
2.1			OES	62JOE 01	32			AA	84TER 01
2.17	0.01	11	COLOR	83OHM 01					
2.19	0.01	11	COLOR	83OHM 01	<u>Co (ug/g)</u>				
2.23			OES	78KNO 01					
2.27			DCPES	73KAR 01	<	10	L	OES	63CLA 01
2.29			TITR	58WAT 01	3.9	1.4		RTNA	61TUR 01
2.36			RR	73KAR 01	<u>Cr (ug/g)</u>				
<u>As (ug/g)</u>					23			RTNA	61TUR 01
1.6			HAA	84TER 04	30			OES	63CLA 01
<u>B (ug/g)</u>					<u>Cu (ug/g)</u>				
80		3	OES	63CLA 01	3			OES	63CLA 01
100		3	OES	63CLA 01	<u>Fe (%)</u>				
<u>Ba (ug/g)</u>					0.855			OES	62JOE 01
<	800	L	OES	63CLA 01	1.08			OES	78KNO 01
<u>Be (ng/g)</u>					1.08			DCPES	73KAR 01
670			AA	82TER 02	1.1			COLOR	59COL 01
670		D	AA	83TER 01	1.13			RR	73KAR 01
<u>Bi (ng/g)</u>					1.15			TITR	69WIC 01
57		D	FAA	84TER 03	<u>Ga (ug/g)</u>				
57			HAA	84TER 02	4			OES	63CLA 01
<u>C-I (%)</u>					<u>Hg (ng/g)</u>				
8.8234	0.5651	41	COUL	85ENG 01	44			FAA	75HEI 01
9.16	0.07	41	COUL	86CAH 01	71.4	2.16		FAA	82FLA 01
9.1673	0.0273	41	COUL	85ENG 01	<u>K (ug/g)</u>				
<u>C-O (ug/g)</u>					6900			RR	73KAR 01
5600	1800		CALC	86CAH 01	<u>La (ug/g)</u>				
<u>C-T (%)</u>					100			OES	63CLA 01
9.72	0.17		COUL	86CAH 01	<u>Mg (%)</u>				
9.73			CB	78TER 01	1.29			OES	78KNO 01
<u>Ca (%)</u>					1.3			OES	62JOE 01
28.6			OES	62JOE 01	1.37			RR	73KAR 01
29.5			RR	73KAR 01	1.39			DCPES	73KAR 01
29.6			XRF	78KNO 01					
29.7			DCPES	73KAR 01					

TABLE 1A-2: INDIVIDUAL DATA FOR NBS SRM 1A (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Mn (ug/g)</u>					<u>Si (%)</u>				
320			OES	78KNO 01	6.53			XRF	78KNO 01
500		3	OES	63CLA 01	6.54			OES	62JOE 01
500		3	OES	63CLA 01	6.58			RR	73KAR 01
					6.63			COLOR	74SHA 01
					6.72			DCPES	73KAR 01
<u>Mo (ug/g)</u>					<u>Sn (ug/g)</u>				
<	1	L	OES	63CLA 01	1.68			AA	82TER 01
<u>Na (ug/g)</u>					2.58	0.1		FAA	85TER 01
2300			RR	73KAR 01	<u>Sr (ug/g)</u>				
2700			DCPES	73KAR 01	1700			OES	75THO 01
<u>Ni (ug/g)</u>					1940			OES	58GRA 01
10			OES	63CLA 01	2000		3	OES	63CLA 01
<u>P (ug/g)</u>					2000			RTNA	61TUR 01
650			WXRF	71FAB 01	3000		3	OES	63CLA 01
1500			OES	78KNO 01	<u>Ti (ug/g)</u>				
<u>Pb (ug/g)</u>					900			RR	73KAR 01
17.2			FAA	75CAM 02	900			DCPES	73KAR 01
19.1			AA	84TER 01	960	61		RTNA	65WAH 01
20			OES	63CLA 01	1000			OES	78KNO 01
21			FAA	79HEI 03	1500		3	OES	63CLA 01
<u>S (ug/g)</u>					2500		3	OES	63CLA 01
2620			CB	84LEC 02	<u>U (ug/g)</u>				
2700			CB	55COL 01	155.75	1.86		ICPES	83NOR 01
2800			CB	74RUN 01	<u>V (ug/g)</u>				
2800			OES	78KNO 01	30			OES	63CLA 01
2800			UU	72BOU 01	<u>Y (ug/g)</u>				
3000			TURB	73SHA 01	10			OES	63CLA 01
3020	90		CB	77LAN 01	<u>Zn (ug/g)</u>				
3073			CB	78TER 01	17			XRF	65BAL 01
<u>Sb (ng/g)</u>					23.3			RTNA	65BAL 01
630			HAA	84TER 04	<u>Zr (ug/g)</u>				
<u>Sc (ug/g)</u>					60			OES	63CLA 01
15			OES	63CLA 01					

TABLE 1B-1: COMPILED DATA FOR NBS SRM 1B ARGILLACEOUS LIMESTONE (revised 3/1/86)

ELE	UNITS	NBS Mean	CONSENSUS Mean \pm SD (n)	RANGE	AA Mean (n)	ICPES Mean (n)	OES Mean (n)	OTHER METHODS Mean (n) Method
Ag	ug/g	---	< 5	---	---	< 5	---	---
Al	ug/g	5920	5730 (2)	5660 - 5800	---	5660 (1)	5800 (1)	---
As	ug/g	---	< 5	---	---	< 5	---	---
Au	ug/g	---	< 3	---	---	< 3	---	---
Ba	ug/g	---	86 (1)	---	---	86 (1)	---	---
Be	ng/g	---	420 (1)	---	---	420 (1)	---	---
Bi	ug/g	---	< 25	---	---	< 25	---	---
C-I	%	11.0	---	---	---	---	---	---
Ca	%	36.4	36.31 \pm 0.44 (3)	35.93 - 36.8	36.2 (1)	35.93 (1)	36.8 (1)	---
Cd	ng/g	---	41 (2)	30 - 52	30 (1)	---	---	52 (1) IDMS
Ce	ug/g	---	7.81 (1)	---	---	7.81 (1)	---	---
Cl	ug/g	---	70 (1)	---	---	---	---	70 (1) XRF
Co	ug/g	---	4.1 (1)	---	---	4.1 (1)	---	---
Cr	ug/g	---	15.7 (1)	---	---	15.7 (1)	---	---
Cu	ug/g	---	5.5 (1)	---	---	5.5 (1)	---	---
Dy	ug/g	---	0.9 (1)	---	---	0.9 (1)	---	---
Er	ng/g	---	570 (1)	---	---	570 (1)	---	---
Eu	ng/g	---	240 (1)	---	---	240 (1)	---	---
F	ug/g	---	1766 (1)	---	---	---	---	1766 (1) XRF
Fe	ug/g	5240	5320 \pm 280 (3)	5000 - 5500	5500 (1)	5460 (1)	5000 (1)	---
Gd	ug/g	---	0.97 (1)	---	---	0.97 (1)	---	---
Hg	ng/g	---	15.7 (1)	---	15.7 (1)	---	---	---
Ho	ng/g	---	200 (1)	---	---	200 (1)	---	---
K	ug/g	2100	2100 (2)	2000 - 2200	2200 (1)	2000 (1)	---	---
LOI	%	41.1	---	---	---	---	---	---
La	ug/g	---	6.86 (1)	---	---	6.86 (1)	---	---
Li	ug/g	---	< 2	---	---	< 2	---	---
Lu	ng/g	---	80 (1)	---	---	80 (1)	---	---
Mg	ug/g	2170	2150 \pm 220 (3)	2000 - 2400	2000 (1)	2040 (1)	2400 (1)	---
Mn	ug/g	1550	1510 \pm 85 (3)	1430 - 1600	1600 (1)	1510 (1)	1430 (1)	---
Mo	ug/g	---	< 3	---	---	< 3	---	---
Na	ug/g	300	330 (2)	260 - 400	400 (1)	260 (1)	---	---
Nd	ug/g	---	4.88 (1)	---	---	4.88 (1)	---	---
Ni	ug/g	---	11 (1)	---	---	11 (1)	---	---
P	ug/g	350	370 (1)	---	---	370 (1)	---	---
Pb	ug/g	---	9.5 (2)	2 - 17	2 (1)	17 (1)	---	---
Pr	ug/g	---	1.18 (1)	---	---	1.18 (1)	---	---
S	ug/g	---	146 (2)	100 - 192	---	---	---	192 (1) XRF
S	ug/g	---	---	---	---	---	---	100 (1) CB
Sb	ug/g	---	< 10	---	---	< 10	---	---
Se	ug/g	---	< 30	---	---	< 30	---	---
Si	%	2.3	2.3 (2)	2.28 - 2.32	---	---	2.32 (1)	2.28 (1) COLOR
Sm	ug/g	---	0.89 (1)	---	---	0.89 (1)	---	---
Sn	ug/g	---	< 3	---	---	< 3	---	---
Sr	ug/g	1180	1170 \pm 60 (3)	1100 - 1208	1100 (1)	1208 (1)	1200 (1)	---
Th	ug/g	---	< 25	---	---	25	---	---
Ti	ug/g	280	296 (2)	292 - 300	---	292 (1)	300 (1)	---
U	ug/g	---	< 30	---	---	30	---	---
V	ug/g	---	29.45 (2)	28.8 - 30.1	---	30.1 (1)	28.8 (1)	---
Y	ug/g	---	7 (1)	---	---	7 (1)	---	---
Yb	ng/g	---	1325 (2)	550 - 2100	---	1325 (2)	---	---
Zn	ug/g	---	40.7 (1)	---	---	40.7 (1)	---	---
Zr	ug/g	---	16 (1)	---	---	16 (1)	---	---

TABLE 1B-2: INDIVIDUAL DATA FOR NBS SRM 1B (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ag (ug/g)</u>					<u>Cr (ug/g)</u>				
< 5	L	ICPES	81CHU 01		15.7	1		ICPES	81CHU 01
<u>Al (ug/g)</u>					<u>Cu (ug/g)</u>				
5660	200		ICPES	81CHU 01	5.5	1		ICPES	81CHU 01
5800			OES	73BES 01	<u>Dy (ug/g)</u>				
<u>As (ug/g)</u>					0.9	0.03		ICPES	85JAR 02
< 5	L	ICPES	81CHU 01		<u>Er (ng/g)</u>				
<u>Au (ug/g)</u>					570	20		ICPES	85JAR 02
< 3	L	ICPES	81CHU 01		<u>Eu (ng/g)</u>				
<u>Ba (ug/g)</u>					240	10		ICPES	85JAR 02
86	1.7		ICPES	81CHU 01	1700	1200		ICPES	81CHU 01
<u>Be (ng/g)</u>					<u>F (ug/g)</u>				
420	50		ICPES	81CHU 01	1766			WXRF	82LEO 03
<u>Bi (ug/g)</u>					<u>Fe (ug/g)</u>				
< 25	L	ICPES	81CHU 01		5000			OES	73BES 01
<u>Ca (%)</u>					5460	140		ICPES	81CHU 01
35.93	1.19		ICPES	81CHU 01	5500			AA	84SCH 01
36.2			AA	84SCH 01	<u>Gd (ug/g)</u>				
36.8			OES	73BES 01	< 5	L		ICPES	81CHU 01
<u>Cd (ng/g)</u>					0.97	0.05		ICPES	85JAR 02
< 2000	L	ICPES	81CHU 01		<u>Hg (ng/g)</u>				
30	80		AA	83GOG 01	15.7	0.9		FAA	82FLA 01
52			IDMS	74ROS 02	<u>Ho (ng/g)</u>				
<u>Ce (ug/g)</u>					200	10		ICPES	85JAR 02
< 15	L	ICPES	81CHU 01		<u>K (ug/g)</u>				
7.81	0.48		ICPES	85JAR 02	2000	50		ICPES	81CHU 01
<u>Cl (ug/g)</u>					2200			AA	84SCH 01
70			WXRF	82LEO 03	<u>La (ug/g)</u>				
<u>Co (ug/g)</u>					< 5	L		ICPES	81CHU 01
4.1	1		ICPES	81CHU 01	6.86	0.35		ICPES	85JAR 02

TABLE 1B-2: INDIVIDUAL DATA FOR NBS SRM 1B (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Li (ug/g)</u>					<u>S (ug/g)</u>				
<	2	L	ICPES	81CHU 01	100			CB	77LAN 01
					192			WXRF	82LEO 03
<u>Lu (ng/g)</u>					<u>Sb (ug/g)</u>				
80	10		ICPES	85JAR 02	<	10	L	ICPES	81CHU 01
<u>Mg (ug/g)</u>					<u>Se (ug/g)</u>				
2000			AA	84SCH 01	<	30	L	ICPES	81CHU 01
2040	60		ICPES	81CHU 01	<u>Si (%)</u>				
2400			OES	73BES 01	2.28	0.05		COLOR	81FON 01
<u>Mn (ug/g)</u>					2.32			OES	73BES 01
1430			OES	73BES 01	<u>Sm (ug/g)</u>				
1510	45		ICPES	81CHU 01	<	5	L	ICPES	81CHU 01
1600			AA	84SCH 01	0.89	0.04		ICPES	85JAR 02
<u>Mo (ug/g)</u>					<u>Sn (ug/g)</u>				
<	3	L	ICPES	81CHU 01	<	3	L	ICPES	81CHU 01
<u>Na (ug/g)</u>					<u>Sr (ug/g)</u>				
260	15		ICPES	81CHU 01	1100			AA	84SCH 01
400			AA	84SCH 01	1200			OES	75THO 01
<u>Nd (ug/g)</u>					1208	24		ICPES	81CHU 01
<	20	L	ICPES	81CHU 01	<u>Th (ug/g)</u>				
4.88	0.09		ICPES	85JAR 02	<	25	L	ICPES	81CHU 01
<u>Ni (ug/g)</u>					<u>Ti (ug/g)</u>				
11	1		ICPES	81CHU 01	292	6		ICPES	81CHU 01
<u>P (ug/g)</u>					300			OES	73BES 01
370	9		ICPES	81CHU 01	<u>U (ug/g)</u>				
<u>Pb (ug/g)</u>					<	30	L	ICPES	81CHU 01
2	0.4		FAA	75CAM 02	<u>V (ug/g)</u>				
17	2		ICPES	81CHU 01	28.8			OES	84PLS 01
<u>Pr (ug/g)</u>					30.1	1.4		ICPES	81CHU 01
1.18	0.03		ICPES	85JAR 02					

TABLE 1B-2: INDIVIDUAL DATA FOR NBS SRM 1B (cont.)

<u>Conc</u>	<u>Uncer</u>	<u>Com</u>	<u>Method</u>	<u>Reference</u>	
<u>Y (ug/g)</u>					
7	0.34		ICPES	85JAR 02	
<u>Yb (ng/g)</u>					
550	20		ICPES	85JAR 02	
2100	100		ICPES	81CHU 01	
<u>Zn (ug/g)</u>					
40.7	2		ICPES	81CHU 01	
<u>Zr (ug/g)</u>					
16	1		ICPES	81CHU 01	

TABLE 1C-1: COMPILED DATA FOR NBS SRM 1C ARGILLACEOUS LIMESTONE (revised 3/1/86)

ELEMENT	UNITS	NBS	CONSENSUS	RANGE	NAA	ICPES	OTHER METHODS
		Mean \pm SD	Mean (n)		Mean (n)	Mean (n)	Mean (n) Method
Al	ug/g	6880 \pm 160	---	---	---	---	---
Ba	ug/g	---	84 (1)	---	84 (1)	---	---
Ca	%	35.96 \pm 0.21	---	---	---	---	---
Cd	ng/g	---	400 (1)	---	---	400 (1)	---
Ce	ug/g	---	7.14 (2)	6.87 - 7.4	7.4 (1)	6.87 (1)	---
Co	ug/g	---	1.15 (1)	---	1.15 (1)	---	---
Cr	ug/g	---	19 (1)	---	19 (1)	---	---
Cs	ng/g	---	590 (1)	---	590 (1)	---	---
Dy	ng/g	---	640 (1)	---	---	640 (1)	---
Er	ng/g	---	410 (1)	---	---	410 (1)	---
Eu	ng/g	---	165 (2)	160 - 170	170 (1)	160 (1)	---
Fe	ug/g	3840 \pm 210	3900 (1)	---	3900 (1)	---	---
Gd	ng/g	---	650 (1)	---	---	650 (1)	---
Hf	ng/g	---	750 (1)	---	750 (1)	---	---
Ho	ng/g	---	140 (1)	---	---	140 (1)	---
K	ug/g	2320 \pm 80	---	---	---	---	---
LOI	%	39.9 \pm 0.1	---	---	---	---	---
La	ug/g	---	4.63 (2)	4.26 - 5	5 (1)	4.26 (1)	---
Lu	ng/g	---	60 (2)	---	60 (1)	60 (1)	---
Mg	ug/g	2530 \pm 240	---	---	---	---	---
Mn	ug/g	190 \pm 40	---	---	---	---	---
Na	ug/g	150 \pm 75	---	---	---	---	---
Nd	ug/g	---	3.72 (2)	3.7 - 3.73	3.7 (1)	3.73 (1)	---
P	ug/g	175 \pm 44	165 (2)	160 - 170	---	170 (1)	160 (1) COLOR
Pr	ug/g	---	0.9 (1)	---	---	0.9 (1)	---
Rb	ug/g	---	12.5 (1)	---	12.5 (1)	---	---
Sc	ug/g	---	1.3 (1)	---	1.3 (1)	---	---
Si	%	3.19 \pm 0.04	---	---	---	---	---
Sm	ng/g	---	730 (2)	---	730 (1)	730 (1)	---
Sr	ug/g	250 \pm 40	---	---	---	---	---
Ta	ng/g	---	90 (1)	---	90 (1)	---	---
Tb	ng/g	---	130 (1)	---	130 (1)	---	---
Th	ug/g	---	1.02 (1)	---	1.02 (1)	---	---
Ti	ug/g	420 \pm 60	---	---	---	---	---
Tm	ng/g	---	70 (1)	---	70 (1)	---	---
U	ug/g	---	1.5 (1)	---	1.5 (1)	---	---
Y	ug/g	---	5.05 (1)	---	---	5.05 (1)	---
Yb	ng/g	---	385 (2)	380 - 390	380 (1)	390 (1)	---

TABLE 1C-2: INDIVIDUAL DATA FOR NBS SRM 1C (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ba (ug/g)</u>					<u>Ho (ng/g)</u>				
84			ITNA	85POT 02	140	10		ICPES	85JAR 02
<u>Cd (ng/g)</u>					<u>La (ug/g)</u>				
< 500			FAA	83UCH 02	4.26	0.1		ICPES	85JAR 02
400	38		ICPES	83UCH 02	5			ITNA	85POT 02
<u>Ce (ug/g)</u>					<u>Lu (ng/g)</u>				
6.87	0.14		ICPES	85JAR 02	60			ICPES	85JAR 02
7.4			ITNA	85POT 02	60			ITNA	85POT 02
<u>Co (ug/g)</u>					<u>Nd (ug/g)</u>				
1.15			ITNA	85POT 02	3.7			ITNA	85POT 02
					3.73	0.05		ICPES	85JAR 02
<u>Cr (ug/g)</u>					<u>P (%)</u>				
19			ITNA	85POT 02	0.016	0.0002		COLOR	83UCH 01
<u>Cs (ng/g)</u>					0.017	0.0001		ICPES	83UCH 01
590			ITNA	85POT 02	<u>Pr (ug/g)</u>				
<u>Dy (ng/g)</u>					0.9	0.02		ICPES	85JAR 02
640	10		ICPES	85JAR 02	<u>Rb (ug/g)</u>				
<u>Er (ng/g)</u>					12.5			ITNA	85POT 02
410	20		ICPES	85JAR 02	<u>Sc (ug/g)</u>				
<u>Eu (ng/g)</u>					1.3			ITNA	85POT 02
160			ICPES	85JAR 02	<u>Sm (ng/g)</u>				
170			ITNA	85POT 02	730			ITNA	85POT 02
<u>Fe (ug/g)</u>					730	20		ICPES	85JAR 02
3900			ITNA	85POT 02	<u>Ta (ng/g)</u>				
<u>Gd (ng/g)</u>					90			ITNA	85POT 02
650	10		ICPES	85JAR 02	<u>Tb (ng/g)</u>				
<u>Hf (ng/g)</u>					130			ITNA	85POT 02
750			ITNA	85POT 02	<u>Th (ug/g)</u>				
					1.02			ITNA	85POT 02

TABLE 1C-2: INDIVIDUAL DATA FOR NBS SRM 1C (cont.)

<u>Conc</u>	<u>Uncer</u>	<u>Com</u>	<u>Method</u>	<u>Reference</u>	
<u>Tm (ng/g)</u>					
70			ITNA	85POT 02	
<u>U (ug/g)</u>					
1.5			ITNA	85POT 02	
<u>Y (ug/g)</u>					
5.05	0.02		ICPES	85JAR 02	
<u>Yb (ng/g)</u>					
380			ITNA	85POT 02	
390	10		ICPES	85JAR 02	

TABLE 27F-1: COMPILED DATA FOR NBS SRM 27F SIBLEY IRON ORE
(revised 3/1/86)

ELEMENT	UNITS	NBS	CONSENSUS	METHOD
		Mean \pm SD	Mean	
Al	ug/g	4340 \pm 160	---	---
Bi	ng/g	---	150 (1)	AA
Ca	ug/g	280 \pm 20	---	---
Fe	%	65.97 \pm 0.05	---	---
K	ug/g	66 \pm 17	---	---
Mg	ug/g	115 \pm 25	---	---
Mn	ug/g	85 \pm 15	---	---
Na	ug/g	89 \pm 22	---	---
P	ug/g	410 \pm 10	---	---
S	ug/g	50 \pm 10	---	---
Si	%	1.95 \pm 0.02	---	---
Ti	ug/g	110 \pm 11	---	---

TABLE 27F-2: INDIVIDUAL DATA FOR NBS SRM 27F
(revised 3/1/86)

Conc	Uncer	Com	Method	Reference
<u>Bi (ng/g)</u>				
150			FAA	84TER 03

TABLE 28-1: COMPILED DATA FOR NBS SRM 28 NORRIE IRON ORE
(revised 3/1/86)

ELEMENT	UNITS	NBS	CONSENSUS	METHOD
		Mean	Mean	
Mn	ug/g	4400	---	---

TABLE 56-1: COMPILED DATA FOR NBS SRM 56 PHOSPHATE ROCK
(revised 3/1/86)

ELEMENT	UNITS	NBS Mean	CONSENSUS Mean	METHOD
Al	%	1.62	---	---
Ca	%	32	---	---
Fe	%	2.31	---	---
P	%	13.66	---	---
S	%	---	2.5 (1)	TURB

TABLE 56-2: INDIVIDUAL DATA FOR NBS SRM 56
(revised 3/1/86)

Conc	Uncer	Com	Method	Reference
<u>S (%)</u>				
2.5			TURB	73SHA 01

TABLE 56B-1: COMPILED DATA FOR NBS SRM 56B PHOSPHATE ROCK
(revised 3/1/86)

ELEMENT	UNITS	NBS Mean	CONSENSUS Mean	METHOD
Ca	%	31.5	---	---
F	%	3.4	3.32 (2)	ISE
P	%	13.76	---	---
Si	%	4.72	4.8 (1)	AA

TABLE 56B-2: INDIVIDUAL DATA FOR NBS SRM 56B
(revised 3/1/86)

Conc	Uncer	Com	Method	Reference
<u>F (%)</u>				
3.25		11	ISE	71PET 01
3.38		11	ISE	71PET 01

<u>Si (%)</u>				
4.8	0.05		AA	82KIS 01

TABLE 69A-1: COMPILED DATA FOR NBS SRM 69A BAUXITE ORE (revised 3/1/86)

ELE	UNITS	NBS	CONSENSUS	MEDIAN	RANGE	AA	XRF	OTHER METHODS	
		Mean	Mean \pm SD (n)	(n)		Mean (n)	Mean \pm SD (n)	Mean (n)	Method
Al	%	29.1	29.5 \pm 0.4 (7)	29.2	29.17 - 30.20	29.2 (2)	29.68 \pm 0.41 (4)	29.17 (1)	TITR
As	ug/g	---	12.4 (2)	---	12.2 - 12.7	12.7 (1)	12.2 (1)	---	
Ba	ug/g	90	73 (1)	---	---	---	73 (1)	---	
Be	ng/g	---	200 (1)	---	---	200 (1)	---	---	
Bi	ng/g	---	668 (1)	---	---	668 (1)	---	---	
Ca	ug/g	2100	1980 \pm 80 (5)	1900	1900 - 2100	1900 (1)	2000 (1)	1900 (1)	OES
Ca	ug/g	---	---	---	---	---	---	2050 (2)	TITR
Cd	ng/g	---	20 (1)	---	---	20 (1)	---	---	
Ce	ug/g	---	94 (1)	---	---	---	94 (1)	---	
Cl	ug/g	---	117 (1)	---	---	---	117 (1)	---	
Co	ug/g	---	3.5 (1)	---	---	---	3.5 (1)	---	
Cr	ug/g	340	270 (1)	---	---	---	---	270 (1)	OES
Cu	ug/g	---	9 (1)	---	---	---	9 (1)	---	
Dy	ug/g	---	4.5 (1)	---	---	---	4.5 (1)	---	
F	ug/g	---	1490 (1)	---	---	---	1490 (1)	---	
Fe	%	4.07	3.99 \pm 0.12 (6)	3.9	3.82 - 4.12	3.96 (1)	3.93 \pm 0.14 (3)	4.12 (1)	OES
Fe	%	---	---	---	---	---	---	4.07 (1)	TITR
Ga	ug/g	---	119 (1)	---	---	---	119 (1)	---	
Gd	ug/g	---	3.2 (1)	---	---	---	3.2 (1)	---	
Hf	ug/g	---	33 (1)	---	---	---	33 (1)	---	
K	ug/g	< 80	75 (2)	---	70 - 80	---	75 (2)	---	
LOI	%	29.55	---	---	---	---	---	---	
La	ug/g	---	71 (1)	---	---	---	71 (1)	---	
Mg	ug/g	120	75 (2)	---	60 - 90	90 (1)	---	60 (1)	OES
Mn	ug/g	< 80	23 (1)	---	---	---	23 (1)	---	
Na	ug/g	< 80	---	---	---	---	---	---	
Nb	ug/g	---	59 (1)	---	---	---	59 (1)	---	
Nd	ug/g	---	28 (1)	---	---	---	28 (1)	---	
P	ug/g	350	510 (2)	---	220 - 800	---	220 (1)	800 (1)	OES
Pb	ug/g	---	34 (2)	---	31 - 37	30.8 (1)	37 (1)	---	
Pr	ug/g	---	5.4 (1)	---	---	---	5.4 (1)	---	
S	ug/g	160	300 \pm 80 (4)	300	200 - 400	---	358 (2)	200 (1)	OES
S	ug/g	---	---	---	---	---	---	300 (1)	TURB
Sb	ug/g	---	2.0 (2)	---	1.0 - 3.1	1.0 (1)	3.1 (1)	---	
Sc	ug/g	---	8.9 (1)	---	---	---	8.9 (1)	---	
Si	%	2.81	2.82 \pm 0.03 (5)	2.8	2.78 - 2.85	2.85 (2)	2.8 \pm 0.02 (3)	---	
Sm	ug/g	---	5.1 (1)	---	---	---	5.1 (1)	---	
Sn	ug/g	---	8.2 (2)	---	8.0 - 8.5	8.51 (1)	8 (1)	---	
Sr	ug/g	---	49 (1)	---	---	---	49 (1)	---	
Th	ug/g	---	94 (1)	---	---	---	94 (1)	---	
Ti	%	1.66	1.62 \pm 0.11 (7)	1.64	1.46 - 1.74	1.46 (2)	1.68 \pm 0.04 (4)	1.7 (1)	OES
U	ug/g	---	6.2 (1)	---	---	---	6.2 (1)	---	
V	ug/g	170	---	---	---	---	---	---	
Y	ug/g	---	16 (1)	---	---	---	16 (1)	---	
Zn	ug/g	---	11 (1)	---	---	---	11 (1)	---	
Zr	ug/g	1330	1285 (1)	---	---	---	1285 (1)	---	

TABLE 69A-2: INDIVIDUAL DATA FOR NBS SRM 69A (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Al (%)</u>					<u>Cr (ug/g)</u>				
29.17			TITR	58WAT 01	270			OES	78KNO 01
29.2			XRF	78KNO 01					
29.2	1.04		AA	79BRE 02	<u>Cu (ug/g)</u>				
29.2	1.04		AA	80LAB 03	9			XRF	76LEO 02
29.64			XRF	79SCH 02					
29.68	0.07		XRF	80LAB 03	<u>Dy (ug/g)</u>				
30.2			EXRF	80DAL 01	4.5			XRF	76LEO 02
<u>As (ug/g)</u>					<u>F (ug/g)</u>				
12.2			XRF	76LEO 02	1490			WXRF	82LEO 03
12.7			HAA	84TER 04					
<u>Ba (ug/g)</u>					<u>Fe (%)</u>				
73			XRF	76LEO 02	3.82	0.08		XRF	80LAB 03
<u>Be (ng/g)</u>					3.88			XRF	79SCH 02
200			AA	82TER 02	3.96	0.03		AA	80LAB 03
200		D	AA	83TER 01	4.07			TITR	69WIC 01
<u>Bi (ng/g)</u>					4.09			EXRF	80DAL 01
668			HAA	84TER 02	4.12			OES	78KNO 01
668		D	FAA	84TER 03	<u>Ga (ug/g)</u>				
<u>Ca (ug/g)</u>					119			XRF	76LEO 02
1100		11	AA	79MEN 01	<u>Gd (ug/g)</u>				
1900		11	AA	79MEN 01	3.2			XRF	76LEO 02
1900			OES	78KNO 01	<u>Hf (ug/g)</u>				
2000			TITR	80HIT 02	33			XRF	76LEO 02
2000			EXRF	80DAL 01	<u>K (ug/g)</u>				
2100			TITR	79MEN 01	70			EXRF	80DAL 01
<u>Cd (ng/g)</u>					80			XRF	78KNO 01
20			AA	84TER 01	<u>La (ug/g)</u>				
<u>Ce (ug/g)</u>					71			XRF	76LEO 02
94			XRF	76LEO 02	<u>Mg (ug/g)</u>				
<u>Cl (ug/g)</u>					60			OES	78KNO 01
117			WXRF	82LEO 03	90			AA	79MEN 01
<u>Co (ug/g)</u>									
3.5			XRF	76LEO 02					

TABLE 69A-2: INDIVIDUAL DATA FOR NBS SRM 69A (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Mn (ug/g)</u>					<u>Sm (ug/g)</u>				
< 23	100	L	OES EXRF	78KNO 01 80DAL 01	5.1			XRF	76LEO 02
<u>Nb (ug/g)</u>					<u>Sn (ug/g)</u>				
59			XRF	76LEO 02	8 8.51	0.4		XRF FAA	76LEO 02 85TER 01
<u>Nd (ug/g)</u>					<u>Sr (ug/g)</u>				
28			XRF	76LEO 02	49			XRF	76LEO 02
<u>P (ug/g)</u>					<u>Th (ug/g)</u>				
220 800			EXRF OES	80DAL 01 78KNO 01	94			XRF	76LEO 02
<u>Pb (ug/g)</u>					<u>Ti (%)</u>				
30.8 37			AA XRF	84TER 01 76LEO 02	1.32 1.46 1.46 1.64 1.66 1.66 1.7 1.74	0.11 0.14 0.14 0.02 0.01		COLOR AA AA XRF XRF XRF OES EXRF	79BRE 01 79BRE 01 80LAB 03 80LAB 03 79SCH 02 79BRE 01 78KNO 01 80DAL 01
<u>Pr (ug/g)</u>					<u>U (ug/g)</u>				
5.4			XRF	76LEO 02	6.2			XRF	76LEO 02
<u>S (ug/g)</u>					<u>Y (ug/g)</u>				
200 300 317 400			OES TURB WXRF EXRF	78KNO 01 73SHA 01 82LEO 03 80DAL 01	16			XRF	76LEO 02
<u>Sb (ug/g)</u>					<u>Zn (ug/g)</u>				
1 3.1			HAA XRF	84TER 04 76LEO 02	11			XRF	76LEO 02
<u>Sc (ug/g)</u>					<u>Zr (ug/g)</u>				
8.9			XRF	76LEO 02	1285			XRF	76LEO 02
<u>Si (%)</u>									
2.44 2.78 2.8 2.82 2.85 2.85	0.04 0.08 0.08		EXRF XRF XRF XRF AA AA	80DAL 01 78KNO 01 79SCH 02 80LAB 03 80LAB 03 79BRE 02					

TABLE 69B-1: COMPILED DATA FOR NBS SRM 69B BAUXITE ORE
(revised 3/1/86)

ELEMENT	UNITS	NBS
		Mean \pm SD
Al	%	25.8 \pm 0.1
Ba	ug/g	72
Ca	ug/g	,930 \pm 140
Ce	ug/g	240
Co	ug/g	1
Cr	ug/g	75 \pm 14
Fe	%	4.99 \pm 0.08
Hf	ug/g	63
K	ug/g	560 \pm 75
LOI	%	27.2 \pm 0.2
Mg	ug/g	510 \pm 50
Mn	ug/g	850 \pm 40
Na	ug/g	180
P	ug/g	514 \pm 17
S	ug/g	2500 \pm 80
Sc	ug/g	8
Si	%	6.27 \pm 0.05
Ti	%	1.14 \pm 0.03
V	ug/g	160 \pm 20
Zn	ug/g	28 \pm 4
Zr	ug/g	2150 \pm 520

TABLE 70-1: COMPILED DATA FOR NBS SRM 70 POTASH FELDSPAR (revised 3/1/86)

ELEMENT	UNITS	NBS Mean	CONSENSUS Mean \pm SD (n)	MEDIAN	RANGE	METHOD
Al	%	9.54	---	---	---	---
Ba	ug/g	300	380 (1)	---	---	NAA
Ca	ug/g	500	---	---	---	---
Ce	ug/g	---	< 4	---	---	NAA
Co	ng/g	---	100 (1)	---	---	NAA
Cr	ug/g	---	< 2	---	---	NAA
Cs	ug/g	---	6.6 (1)	---	---	NAA
Eu	ng/g	---	400 (1)	---	---	NAA
Fe	ug/g	210	300 (1)	---	---	NAA
Hf	ng/g	---	< 200	---	---	NAA
Hg	ng/g	---	98 (1)	---	---	AA
K	%	10.44	---	---	---	---
LOI	%	0.22	---	---	---	---
La	ug/g	---	< 3	---	---	NAA
Lu	ng/g	---	< 40	---	---	NAA
Mg	ug/g	78	---	---	---	---
Mn	ug/g	7	---	---	---	---
Na	%	1.76	---	---	---	---
Nd	ug/g	---	< 3	---	---	NAA
P	ug/g	52	---	---	---	---
Rb	ug/g	---	470 (1)	---	---	NAA
Sb	ng/g	---	< 500	---	---	NAA
Sc	ng/g	---	40 (1)	---	---	NAA
Si	%	31.13	---	---	---	---
Sm	ng/g	---	< 500	---	---	NAA
Ta	ng/g	---	< 200	---	---	NAA
Tb	ng/g	---	< 200	---	---	NAA
Th	ng/g	---	< 400	---	---	NAA
Ti	ug/g	12	---	---	---	---
Yb	ng/g	---	< 300	---	---	NAA
Zn	ug/g	---	6.9 \pm 0.8 (3)	7.3	6.0 - 7.5	NAA/XRF
Zr	ug/g	---	< 75	---	---	NAA

TABLE 70-2: INDIVIDUAL DATA FOR NBS SRM 70 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ba (ug/g)</u>					<u>Sb (ng/g)</u>				
380	17		ITNA	77FLA 01	<	500	L	ITNA	77FLA 01
<u>Ce (ug/g)</u>					<u>Sc (ng/g)</u>				
<	4	L	ITNA	77FLA 01	40	3		ITNA	77FLA 01
<u>Co (ng/g)</u>					<u>Sm (ng/g)</u>				
100			ITNA	77FLA 01	<	500	L	ITNA	77FLA 01
<u>Cr (ug/g)</u>					<u>Ta (ng/g)</u>				
<	2	L	ITNA	77FLA 01	<	200	L	ITNA	77FLA 01
<u>Cs (ug/g)</u>					<u>Tb (ng/g)</u>				
6.6	0.19		ITNA	77FLA 01	<	200	L	ITNA	77FLA 01
<u>Eu (ng/g)</u>					<u>Th (ng/g)</u>				
400	10		ITNA	77FLA 01	<	400	L	ITNA	77FLA 01
<u>Fe (ug/g)</u>					<u>Yb (ng/g)</u>				
300			ITNA	77FLA 01	<	300	L	ITNA	77FLA 01
<u>Hf (ng/g)</u>					<u>Zn (ug/g)</u>				
<	200	L	ITNA	77FLA 01	6	0.71		ITNA	77FLA 01
<u>Hg (ng/g)</u>					7.3			RTNA	65BAL 01
98	5.95		FAA	82FLA 01	7.5			XRF	65BAL 01
<u>La (ug/g)</u>					<u>Zr (ug/g)</u>				
<	3	L	ITNA	77FLA 01	<	75	L	ITNA	77FLA 01
<u>Lu (ng/g)</u>									
<	40	L	ITNA	77FLA 01					
<u>Nd (ug/g)</u>									
<	3	L	ITNA	77FLA 01					
<u>Rb (ug/g)</u>									
470	26		ITNA	77FLA 01					

TABLE 70A-1: COMPILED DATA FOR NBS SRM 70A POTASH FELDSPAR (revised 3/1/86)

ELEMENT	UNITS	NBS Mean	CONSENSUS Mean \pm SD (n)	MEDIAN	RANGE	AA Mean (n)	NAA Mean (n)	OTHER METHODS Mean \pm SD (n) Method
Al	%	9.47	---	---	---	---	---	---
Ba	ug/g	180	121 (2)	---	120 - 122	---	120 (1)	121.9 (1) IDMS
Be	ng/g	---	640 (1)	---	---	640 (1)	---	---
Bi	ng/g	---	68 (1)	---	---	68 (1)	---	---
C	ug/g	---	50 (1)	---	---	---	---	50 (1) CB
Ca	ug/g	790	770 (2)	---	640 - 900	770 (2)	---	---
Cd	ng/g	---	8.7 (1)	---	---	---	---	8.7 (1) IDMS
Ce	ug/g	---	< 4	---	---	---	< 4	---
Co	ng/g	---	200 (1)	---	---	---	200 (1)	---
Cr	ug/g	---	< 4	---	---	---	< 4	---
Cs	ug/g	---	9.64 (2)	---	9.28 - 10	10 (1)	9.28 (1)	---
Eu	ng/g	---	570 (1)	---	---	---	570 (1)	---
Fe	ug/g	520	600 \pm 100 (3)	600	490 - 700	595 (2)	600 (1)	---
Hf	ng/g	---	< 300	---	---	---	< 300	---
Hg	ng/g	---	15 (1)	---	---	15 (1)	---	---
K	%	9.79	9.76 \pm 0.07 (4)	9.71	9.71 - 9.85	9.82 (2)	---	9.71 (1) ISE
K	%	---	---	---	---	---	---	9.71 (1) FE
LOI	%	0.4	---	---	---	---	---	---
La	ug/g	---	< 2	---	---	---	< 2	---
Lu	ng/g	---	8.0 (1)	---	---	---	---	8.0 (1) IDMS
Na	%	1.87	1.86 \pm 0.04 (5)	1.87	1.8 - 1.9	1.87 (2)	---	1.85 (1) XRF
Na	%	---	---	---	---	---	---	1.9 (1) FE
Na	%	---	---	---	---	---	---	1.8 (1) ISE
Nd	ug/g	---	< 3	---	---	---	< 3	---
Rb	ug/g	550	525 \pm 9 (9)	524.2	507 - 540	540 (1)	530 (1)	519 (2) XRF
Rb	ug/g	---	---	---	---	---	---	524 \pm 4 (4) IDMS
Rb	ug/g	---	---	---	---	---	---	520.4 (1) MS
S	ug/g	---	3.0 (1)	---	---	---	---	3.0 (1) CB
Sb	ng/g	---	< 400	---	---	---	< 400	---
Sc	ng/g	---	110 (1)	---	---	---	110 (1)	---
Se	ug/g	---	66.1 (1)	---	---	---	---	66.1 (1) XRF
Si	%	31.3	---	---	---	---	---	---
Sm	ng/g	---	< 200	---	---	---	< 200	---
Sn	ug/g	---	0.75 (1)	---	---	0.75 (1)	---	---
Sr	ug/g	---	64.7 \pm 1.4 (6)	64.8	62.4 - 66.4	---	---	62.43 (1) XRF
Sr	ug/g	---	---	---	---	---	---	64.8 (1) MS
Sr	ug/g	---	---	---	---	---	---	65.2 \pm 1.0 (4) IDMS
Sr-87/86	ratio	---	1.2002 \pm 0.0024 (3)	1.2002	1.1978 - 1.2025	---	---	1.2002 (1) MS
Sr-87/86	ratio	---	---	---	---	---	---	1.2002 (2) IDMS
Ta	ng/g	---	150 (1)	---	---	---	150 (1)	---
Tb	ng/g	---	< 200	---	---	---	< 200	---
Th	ng/g	---	300 (1)	---	---	---	300 (1)	---
Ti	ug/g	60	---	---	---	---	---	---
Tl	ug/g	---	2.81 (2)	---	2.72 - 2.91	---	---	2.81 (2) ASV
Yb	ng/g	---	< 500	---	---	---	< 500	---
Zn	ug/g	---	< 5	---	---	---	< 5	---
Zr	ug/g	---	< 90	---	---	---	< 90	---

TABLE 70A-2: INDIVIDUAL DATA FOR NBS SRM 70A (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ba (ug/g)</u>					<u>Hf (ng/g)</u>				
120	5		ITNA	77FLA 01	<	300	L	ITNA	77FLA 01
121.9			IDMS	69LAE 01	<u>Hg (ng/g)</u>				
<u>Be (ng/g)</u>					15	1.03		FAA	82FLA 01
640			AA	83TER 01	<u>K (%)</u>				
<u>Bi (ng/g)</u>					9.71			FE	75PUF 01
68			FAA	84TER 03	9.71			ISE	75PUF 01
<u>C (ug/g)</u>					9.79			AA	73RAM 01
50			CB	78TER 01	9.85			AA	84SCH 01
<u>Ca (ug/g)</u>					<u>La (ug/g)</u>				
640			AA	73RAM Q1	<	2	L	ITNA	77FLA 01
900			AA	84SCH 01	<u>Lu (ng/g)</u>				
<u>Cd (ng/g)</u>					<	100	L	ITNA	77FLA 01
8.7			IDMS	74ROS 02	8			IDMS	76MCC 03
<u>Ce (ug/g)</u>					<u>Na (%)</u>				
<	4	L	ITNA	77FLA 01	1.8			ISE	75PUF 01
<u>Co (ng/g)</u>					1.85			WXRF	83BAL 01
200			ITNA	77FLA 01	1.87			AA	84SCH 01
<u>Cr (ug/g)</u>					1.87			AA	73RAM 01
<	4	L	ITNA	77FLA 01	1.9			FE	75PUF 01
<u>Cs (ug/g)</u>					<u>Nd (ug/g)</u>				
9.28	0.15		ITNA	77FLA 01	<	3	L	ITNA	77FLA 01
10			AA	72ALL 01	<u>Rb (ug/g)</u>				
<u>Eu (ng/g)</u>					507.4			WXRF	83VAL 01
570	10		ITNA	77FLA 01	519.1			IDMS	82KRA 01
<u>Fe (ug/g)</u>					520.4			MS	84ZIC 01
490			AA	73RAM 01	523.4			IDMS	70LAE 01
600			ITNA	77FLA 01	524.2	1.5		IDMS	74COR 01
700			AA	84SCH 01	529.8	1.6		IDMS	69COM 01
					529.9	1		XRF	69COM 01
					530	15		ITNA	77FLA 01
					540			AA	72ALL 01
					<u>S (ug/g)</u>				
					3			CB	78TER 01

TABLE 70A-2: INDIVIDUAL DATA FOR NBS SRM 70A (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Sb (ng/g)</u>					<u>Yb (ng/g)</u>				
<	400	L	ITNA	77FLA 01	<	500	L	ITNA	77FLA 01
<u>Sc (ng/g)</u>					<u>Zn (ug/g)</u>				
110	3		ITNA	77FLA 01	<	5	L	ITNA	77FLA 01
<u>Se (ug/g)</u>					<u>Zr (ug/g)</u>				
66.1	0.2		XRF	69COM 01	<	90	L	ITNA	77FLA 01
<u>Sm (ng/g)</u>									
<	200	L	ITNA	77FLA 01					
<u>Sn (ug/g)</u>									
0.75			AA	82TER 01					
<u>Sr (ug/g)</u>									
62.43			WXRF	83VAL 01					
64	0.4		IDMS	74COR 01					
64.8			MS	84ZIC 01					
65.1	0.1		IDMS	69COM 01					
65.5			IDMS	82KRA 01					
66.4			IDMS	70LAE 01					
<u>Sr-87/86 (ratio)</u>									
1.1978	0.0033		IDMS	74COR 01					
1.2002			MS	84ZIC 01					
1.2025	0.0012		IDMS	69COM 01					
<u>Ta (ng/g)</u>									
150	8		ITNA	77FLA 01					
<u>Tb (ng/g)</u>									
<	200	L	ITNA	77FLA 01					
<u>Th (ng/g)</u>									
300			ITNA	77FLA 01					
<u>Tl (ug/g)</u>									
2.715	0.217	7	ASV	82CAL 01					
2.906	0.25	7	ASV	82CAL 01					

TABLE 76-1: COMPILED DATA FOR NBS SRM 76 BURNT REFRACTORY (revised 3/1/86)

ELEMENT	UNITS	NBS Mean	CONSENSUS Mean (n)	RANGE	XRF Mean (n)	OTHER METHODS Mean (n) Method
Al	%	19.93	20.05 (1)	---	20.05 (1)	---
Ca	ug/g	1930	1600 (1)	---	1600 (1)	---
Fe	%	1.66	1.53 (2)	1.47 - 1.59	1.59 (1)	1.47 (1) COLOR
K	%	1.28	1.29 (1)	---	1.29 (1)	---
LOI	%	0.22	---	---	---	---
Li	ug/g	510	---	---	---	---
Mg	ug/g	3500	2800 (1)	---	2800 (1)	---
Mn	ug/g	---	230 (1)	---	230 (1)	---
Na	ug/g	1100	---	---	---	---
P	ug/g	300	---	---	---	---
Si	%	25.53	25.76 (1)	---	25.76 (1)	---
Sr	ug/g	---	85 (1)	---	85 (1)	---
Ti	%	1.32	1.34 (1)	---	1.34 (1)	---
V	ug/g	120	---	---	---	---
Zr	ug/g	520	---	---	---	---

TABLE 77-1: COMPILED DATA FOR NBS SRM 77 BURNT REFRACTORY (revised 3/1/86)

ELEMENT	UNITS	NBS Mean	CONSENSUS Mean (n)	RANGE	XRF Mean (n)	OTHER METHODS Mean (n) Method
Al	%	27.73	31.02 (2)	30.63 - 31.4	31.02 (2)	---
Ca	ug/g	1860	1400 (1)	---	1400 (1)	---
Fe	ug/g	6290	5450 (2)	5200 - 5700	5200 (1)	5700 (1) COLOR
K	%	1.75	1.79 (1)	---	1.79 (1)	---
LOI	%	0.21	---	---	---	---
Li	ug/g	1630	---	---	---	---
Mg	ug/g	3000	2200 (1)	---	2200 (1)	---
Mn	ug/g	---	80 (1)	---	80 (1)	---
Na	ug/g	440	---	---	---	---
P	ug/g	1960	---	---	---	---
Si	%	15.12	15.32 (2)	15.3 - 15.34	15.32 (2)	---
Sr	ug/g	---	1200 (1)	---	1200 (1)	---
Ti	%	1.76	1.82 (1)	---	1.82 (1)	---
V	ug/g	180	---	---	---	---
Zr	ug/g	670	---	---	---	---

TABLE 78-1: COMPILED DATA FOR NBS SRM 78 BURNT REFRACTORY (revised 3/1/86)

ELEMENT	UNITS	NBS Mean	CONSENSUS Mean (n)	RANGE	XRF Mean (n)	OTHER METHODS Mean (n) Method
Al	%	---	36.84 (1)	---	---	36.84 (1) TITR
Fe	ug/g	---	5000 (1)	---	---	5000 (1) COLOR
Li	ug/g	930	---	---	---	---
Na	ug/g	440	---	---	---	---

TABLE 76-2: INDIVIDUAL DATA FOR NBS SRM 76
(revised 3/1/86)

Conc	Uncer	Com	Method	Reference
<u>Al (%)</u>				
20.05			WXRF	67KOD 01
<u>Ca (ug/g)</u>				
1600			WXRF	67KOD 01
<u>Fe (%)</u>				
1.47	0.01		COLOR	59COL 01
1.59			WXRF	67KOD 01
<u>K (%)</u>				
1.29			WXRF	67KOD 01
<u>Mg (ug/g)</u>				
2800			WXRF	67KOD 01
<u>Mn (ug/g)</u>				
230			WXRF	67KOD 01
<u>Si (%)</u>				
25.76			WXRF	67KOD 01
<u>Sr (ug/g)</u>				
85			WXRF	67KOD 01
<u>Ti (%)</u>				
1.34			WXRF	67KOD 01

TABLE 77-2: INDIVIDUAL DATA FOR NBS SRM 77
(revised 3/1/86)

Conc	Uncer	Com	Method	Reference
<u>Al (%)</u>				
30.63			WXRF	67KOD 01
31.4			XRF	72ASH 01
<u>Ca (ug/g)</u>				
1400			WXRF	67KOD 01
<u>Fe (ug/g)</u>				
5200			WXRF	67KOD 01
5700	100		COLOR	59COL 01
<u>K (%)</u>				
1.79			WXRF	67KOD 01
<u>Mg (ug/g)</u>				
2200			WXRF	67KOD 01
<u>Mn (ug/g)</u>				
80			WXRF	67KOD 01
<u>Si (%)</u>				
15.3			XRF	72ASH 01
15.34			WXRF	67KOD 01
<u>Sr (ug/g)</u>				
1200			WXRF	67KOD 01
<u>Ti (%)</u>				
1.82			WXRF	67KOD 01

TABLE 78-2: INDIVIDUAL DATA FOR NBS SRM 78 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference
<u>Al (%)</u>				
36.84			TITR	58WAT 01
<u>Fe (ug/g)</u>				
5000	100		COLOR	59COL 01

TABLE 76A-1: COMPILED DATA FOR NBS SRMs 76A-78A BURNT REFRACTORIES
(revised 3/1/86)

ELEMENT	UNITS	76A	77A	78A
Al	%	20.47	31.84	37.92
Ca	ug/g	1570	360	790
Fe	%	1.12	0.699	0.840
K	%	1.10	0.075	1.01
LOI	%	0.34	0.22	0.42
Li	ug/g	200	120	560
Mg	ug/g	3140	2290	4220
Na	ug/g	520	275	580
P	ug/g	520	400	5700
Si	%	25.63	16.34	9.06
Sr	ug/g	310	75	2120
Ti	%	1.22	1.59	1.93

TABLE 79A-1: COMPILED DATA FOR NBS SRM 79A FLUORSPAR
(revised 3/1/86)

ELEMENT	UNITS	NBS	CONSENSUS	METHOD
		Mean \pm SD	Mean	
Ca	%	49.99 \pm 0.03	---	---
CaF ₂	%	97.39 \pm 0.06	---	---
F	%	47.40 \pm 0.03	---	---
Si	ug/g	3130	---	---
U	ng/g	---	210 (1)	NAA

TABLE 80-1: COMPILED DATA FOR NBS SRM 80 SODA-LIME GLASS
(revised 3/1/86)

ELEMENT	UNITS	NBS	CONSENSUS	METHOD
		Mean	Mean	
Al	ug/g	1750	---	---
As	ug/g	690	---	---
As(III)	ug/g	230	---	---
As(V)	ug/g	460	---	---
Ca	%	3.32	3.2 (1)	TITR
Cl	ug/g	470	---	---
Fe	ug/g	450	---	---
K	ug/g	330	---	---
LOI	%	0.3	---	---
Mg	%	1.95	1.93 (1)	TITR
Mn	ug/g	23	---	---
Na	%	12.35	---	---
S	ug/g	1640	---	---
Si	%	34.6	---	---
Ti	ug/g	120	---	---
Zr	ug/g	22	---	---

TABLE 79A-2: INDIVIDUAL DATA FOR NBS SRM 79A
(revised 3/1/86)

Conc	Uncer	Com	Method	Reference
<hr/>				
<u>U (ng/g)</u>				
210	30		DNA	86GAU 01

TABLE 80-2: INDIVIDUAL DATA FOR NBS SRM 80
(revised 3/1/86)

Conc	Uncer	Com	Method	Reference
<hr/>				
<u>Ca (%)</u>				
3.2			TITR	80HIT 02
<u>Mg (%)</u>				
1.93			TITR	80HIT 02

TABLE 88-1: COMPILED DATA FOR NBS SRM 88 DOLOMITIC LIMESTONE (revised 3/1/86)

ELEMENT	UNITS	NBS	CONSENSUS	MEDIAN	RANGE	OTHER METHODS		
		Mean	Mean \pm SD (n)			Mean \pm SD (n) method		
Al	ug/g	350	---	---	---	---		
C-Inorg	%	12.9	12.93 \pm 0.06 (3)	12.90	12.90 - 13.00	12.93 \pm 0.06 (3)	COUL	
C-Org	ug/g	800	---	---	---	---		
Ca	%	21.8	21.81 (1)	---	---	21.81 (1)	TITR	
Co	ug/g	---	0.7 (1)	---	---	0.7 (1)	NAA	
Cr	ug/g	---	3.9 (1)	---	---	3.9 (1)	NAA	
Fe	ug/g	590	580 (1)	---	---	580 (1)	COLOR	
H	ug/g	80	---	---	---	---		
K	ug/g	250	---	---	---	---		
LOI	%	47.52	---	---	---	---		
Mg	%	12.95	---	---	---	---		
Mn	ug/g	50	---	---	---	---		
Na	ug/g	590	---	---	---	---		
P	ug/g	13	---	---	---	---		
S	ug/g	130	287 \pm 15 (3)	290	270 - 300	300 (1)	TURB	
S	ug/g	---	---	---	---	280 (2)	CB	
Si	ug/g	1450	---	---	---	---		
Sr	ug/g	< 85	57.5 (2)	---	55 - 60	60 (1)	NAA	
Sr	ug/g	---	---	---	---	55 (1)	OES	
Ti	ug/g	30	182 (2)	---	24 - 340	24 (1)	NAA	
Ti	ug/g	---	---	---	---	340 (1)	COLOR	

TABLE 88B-1: COMPILED DATA FOR NBS SRM 88B DOLOMITIC LIMESTONE
(revised 3/1/86)

ELEMENT	UNITS	NBS
		Mean \pm SD
Al	ug/g	1778 \pm 69
C-Inorg	%	12.66 \pm 0.03
Ca	%	21.53 \pm 0.36
Fe	ug/g	1937 \pm 14
H2O-	%	0.24
K	ug/g	855 \pm 20
LOI	%	46.98
Mg	%	12.68 \pm 0.04
Mn	ug/g	124 \pm 9
Na	ug/g	215 \pm 5
P	ug/g	19 \pm 1
Si	ug/g	5282 \pm 93
Sr	ug/g	64 \pm 3
Ti	ug/g	96

TABLE 88-2: INDIVIDUAL DATA FOR NBS SRM 88 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>C-Inorg (%)</u>					<u>Fe (ug/g)</u>				
12.9	0.42	41	COUL	86CAH 01	580	10		COLOR	59COL 01
12.9047	0.0109	41	COUL	85ENG 01					
13.0003	0.1556	41	COUL	85ENG 01	<u>S (ug/g)</u>				
<u>Ca (%)</u>					270			CB	55COL 01
21.81	0.03		TITR	80HIT 02	290			CB	77LAN 01
					300			TURB	73SHA 01
<u>Co (ug/g)</u>					<u>Sr (ug/g)</u>				
0.7	0.6		RTNA	61TUR 01	55			OES	58GRA 01
					60			RTNA	61TUR 01
<u>Cr (ug/g)</u>					<u>Ti (ug/g)</u>				
3.9			RTNA	61TUR 01	24	4		RTNA	65WAH 01
					340			COLOR	63KOR 01

TABLE 88A-1: COMPILED DATA FOR NBS SRM 88A DOLOMITIC LIMESTONE (revised 3/1/86)

ELEMENT	UNITS	NBS Mean	CONSENSUS Mean \pm SD (n)	MEDIAN	RANGE	NAA Mean (n)	ICPES Mean (n)	XRF Mean (n)	OTHER METHODS	
									Mean	(n) method
Ag	ug/g	---	< 3	---	---	---	< 3	---	---	---
Al	ug/g	1000	600 (2)	---	300 - 900	---	900 (1)	300 (1)	---	---
As	ug/g	---	< 5	---	---	---	< 5	---	---	---
Au	ug/g	---	< 3	---	---	---	< 3	---	---	---
Ba	ug/g	---	18 \pm 8 (3)	14	13 - 28	14 (1)	13 (1)	28 (1)	---	---
Be	ng/g	---	180 (1)	---	---	---	180 (1)	---	---	---
Bi	ug/g	---	< 25	---	---	---	< 25	---	---	---
C-Inorg	%	12.72	12.79 (2)	---	12.75 - 12.83	---	---	---	12.79 (2)	CB
Ca	%	21.56	21.73 (2)	---	20.96 - 22.5	---	20.96 (1)	22.5 (1)	---	---
Cd	ug/g	---	< 2	---	---	---	< 2	---	---	---
Ce	ug/g	---	3.3 \pm 1.3 (3)	2.7	2.46 - 4.8	2.7 (1)	2.46 (1)	4.8 (1)	---	---
Cl	ug/g	---	113 (1)	---	---	---	---	113 (1)	---	---
Co	ug/g	---	2.3 \pm 1.6 (3)	3	0.5 - 3.4	0.5 (1)	3 (1)	3.4 (1)	---	---
Cr	ug/g	---	6.95 (2)	---	2.2 - 11.7	2.2 (1)	11.7 (1)	---	---	---
Cu	ug/g	---	6.95 (2)	---	2.5 - 11.4	---	2.5 (1)	11.4 (1)	---	---
Dy	ng/g	---	270 (1)	---	---	---	270 (1)	---	---	---
Er	ng/g	---	180 (1)	---	---	---	180 (1)	---	---	---
Eu	ng/g	---	450 \pm 650 (3)	620	70 - 1200	70 (1)	635 (2)	---	---	---
F	ug/g	---	500 (1)	---	---	---	---	500 (1)	---	---
Fe	ug/g	1960	2090 \pm 90 (3)	2050	2030 - 2200	2030 (1)	2050 (1)	2200 (1)	---	---
Gd	ug/g	---	1.86 (2)	---	0.32 - 3.4	---	1.86 (2)	---	---	---
Hf	ng/g	---	180 (1)	---	---	180 (1)	---	---	---	---
Hg	ng/g	---	28.2 (1)	---	---	---	---	---	---	---
Ho	ng/g	---	60 (1)	---	---	---	60 (1)	---	---	28.2 (1) AA
K	ug/g	1000	850 (2)	---	700 - 1000	---	1000 (1)	700 (1)	---	---
LOI	%	46.7	---	---	---	---	---	---	---	---
La	ug/g	---	1.7 \pm 0.4 (3)	1.6	1.44 - 2.2	1.6 (1)	1.44 (1)	2.2 (1)	---	---
Li	ug/g	---	< 2	---	---	---	< 2	---	---	---
Lu	ng/g	---	30 (2)	---	30 - 30	30 (1)	30 (1)	---	---	---

TABLE 88A-1: COMPILED DATA FOR NBS SRM 88A: Dolomitic Limestone (cont.)

ELEMENT	UNITS	NBS Mean	CONSENSUS Mean \pm SD (n)	MEDIAN	RANGE	NAA Mean (n)	ICPES Mean (n)	XRF Mean (n)	OTHER METHODS	
									Mean	(n) method
Mg	%	12.84	13.03 (2)	---	13 - 13.06	---	13.06 (1)	13 (1)	---	---
Mn	ug/g	230	180 (2)	---	150 - 210	---	210 (1)	150 (1)	---	---
Mo	ug/g	---	< 3	---	---	---	< 3	---	---	---
Na	ug/g	74	127 (2)	---	104 - 150	150 (1)	104 (1)	---	---	---
Nd	ug/g	---	1.33 (2)	---	1.26 - 1.4	1.4 (1)	1.26 (1)	---	---	---
Ni	ug/g	---	< 3	---	---	---	< 3	---	---	---
P	ug/g	44	145 (2)	---	70 - 220	---	70 (1)	220 (1)	---	---
Pb	ug/g	---	15 (2)	---	3 - 27	---	27 (1)	3 (1)	---	---
Pr	ng/g	---	310 (1)	---	---	---	310 (1)	---	---	---
Rb	ug/g	---	2 (1)	---	---	2 (1)	---	---	---	---
S	ug/g	---	34 \pm 39 (3)	71.7	4 - 78	---	---	78 (1)	12.5 (2)	CB
Sb	ug/g	---	< 10	---	---	---	< 10	---	---	---
Sc	ng/g	---	300 (1)	---	---	300 (1)	---	---	---	---
Se	ug/g	---	< 30	---	---	---	< 30	---	---	---
Si	ug/g	5600	4100 (1)	---	---	---	---	4100 (1)	---	---
Sm	ng/g	---	290 (2)	---	280 - 300	300 (1)	280 (1)	---	---	---
Sn	ug/g	---	2.1 (1)	---	---	---	---	2.1 (1)	---	---
Sr	ug/g	85	59 \pm 32 (3)	41	41 - 96	---	41 (1)	41 (1)	96 (1)	OES
Ta	ng/g	---	30 (1)	---	---	30 (1)	---	---	---	---
Tb	ng/g	---	50 (1)	---	---	50 (1)	---	---	---	---
Th	ng/g	---	190 (1)	---	---	190 (1)	---	---	---	---
Ti	ug/g	120	123 (2)	---	66 - 180	---	66 (1)	180 (1)	---	---
U	ng/g	---	300 (1)	---	---	300 (1)	---	---	---	---
V	ug/g	---	5.6 (2)	---	2.2 - 9	---	9 (1)	---	2.2 (1)	OES
Y	ug/g	---	2.23 (2)	---	2.16 - 2.3	---	2.16 (1)	2.3 (1)	---	---
Yb	ng/g	---	510 \pm 600 (3)	170	150 - 1200	150 (1)	685 (2)	---	---	---
Zn	ug/g	---	3.45 (2)	---	2.8 - 4.1	---	4.1 (1)	2.8 (1)	---	---
Zr	ug/g	---	6.6 (1)	---	---	---	---	6.6 (1)	---	---

TABLE 88A-2: INDIVIDUAL DATA FOR NBS SRM 88A (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ag (ug/g)</u>					<u>Cl (ug/g)</u>				
<	3	L	ICPES	81CHU 01	113			WXRF	82LEO 03
<u>Al (ug/g)</u>					<u>Co (ug/g)</u>				
300			EXRF	80DAL 01	0.5			ITNA	85POT 02
900	30		ICPES	81CHU 01	3	1		ICPES	81CHU 01
<u>As (ug/g)</u>					3.4			XRF	76LEO 02
<u>Au (ug/g)</u>					<u>Cr (ug/g)</u>				
<	5	L	ICPES	81CHU 01	2.2			ITNA	85POT 02
<u>Ba (ug/g)</u>					11.7	1		ICPES	81CHU 01
13	0.26		ICPES	81CHU 01	<u>Cu (ug/g)</u>				
14			ITNA	85POT 02	2.5	1		ICPES	81CHU 01
28			XRF	76LEO 02	11.4			XRF	76LEO 02
<u>Be (ng/g)</u>					<u>Dy (ng/g)</u>				
180	20		ICPES	81CHU 01	270	10		ICPES	85JAR 02
<u>Bi (ug/g)</u>					<u>Er (ng/g)</u>				
<	25	L	ICPES	81CHU 01	180	10		ICPES	85JAR 02
<u>C-Inorg (%)</u>					<u>Eu (ng/g)</u>				
12.75	0.02		CB	80ANO 01	70			ITNA	85POT 02
12.83			CB	78TER 01	70	10		ICPES	85JAR 02
<u>Ca (%)</u>					1200	600		ICPES	81CHU 01
20.96	0.69		ICPES	81CHU 01	<u>F (ug/g)</u>				
22.5			EXRF	80DAL 01	500			WXRF	82LEO 03
<u>Cd (ug/g)</u>					<u>Fe (ug/g)</u>				
<	2	L	ICPES	81CHU 01	2030			ITNA	85POT 02
<u>Ce (ug/g)</u>					2050	40		ICPES	81CHU 01
<	15	L	ICPES	81CHU 01	2200			EXRF	80DAL 01
2.46	0.27		ICPES	85JAR 02	<u>Gd (ug/g)</u>				
2.7			ITNA	85POT 02	0.32	0.02		ICPES	85JAR 02
4.8			XRF	76LEO 02	3.4	0.35		ICPES	81CHU 01
					<u>Hf (ng/g)</u>				
					180			ITNA	85POT 02

TABLE 88A-2: INDIVIDUAL DATA FOR NBS SRM 88A (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Hg (ng/g)</u>					<u>Ni (ug/g)</u>				
28.2	0.68		FAA	82FLA 01	<	3	L	ICPES	81CHU 01
<u>Ho (ng/g)</u>					<u>P (ug/g)</u>				
60	10		ICPES	85JAR 02	70	4		ICPES	81CHU 01
<u>K (ug/g)</u>					220			EXRF	80DAL 01
700			EXRF	80DAL 01	<u>Pb (ug/g)</u>				
1000	25		ICPES	81CHU 01	3			XRF	76LEO 02
<u>La (ug/g)</u>					27	3		ICPES	81CHU 01
<	5	L	ICPES	81CHU 01	<u>Pr (ng/g)</u>				
1.44	0.16		ICPES	85JAR 02	310	20		ICPES	85JAR 02
1.6			ITNA	85POT 02	<u>Rb (ug/g)</u>				
2.2			XRF	76LEO 02	2			ITNA	85POT 02
<u>Li (ug/g)</u>					<u>S (ug/g)</u>				
<	2	L	ICPES	81CHU 01	4			CB	78TER 01
<u>Lu (ng/g)</u>					21			CB	77LAN 01
30			ITNA	85POT 02	78			WXRf	82LEO 03
30	10		ICPES	85JAR 02	<u>Sb (ug/g)</u>				
<u>Mg (%)</u>					<	10	L	ICPES	81CHU 01
13			EXRF	80DAL 01	<u>Sc (ng/g)</u>				
13.06	0.4		ICPES	81CHU 01	300			ITNA	85POT 02
<u>Mn (ug/g)</u>					<u>Se (ug/g)</u>				
150			EXRF	80DAL 01	<	30	L	ICPES	81CHU 01
210	6.3		ICPES	81CHU 01	<u>Si (ug/g)</u>				
<u>Mo (ug/g)</u>					4100			EXRF	80DAL 01
<	3	L	ICPES	81CHU 01	<u>Sm (ng/g)</u>				
<u>Na (ug/g)</u>					280	10		ICPES	85JAR 02
104	7		ICPES	81CHU 01	300			ITNA	85POT 02
150			ITNA	85POT 02	<u>Sn (ug/g)</u>				
<u>Nd (ug/g)</u>					<	3	L	ICPES	81CHU 01
<	20	L	ICPES	81CHU 01	2.1			XRF	76LEO 02
1.26	0.11		ICPES	85JAR 02					
1.4			ITNA	85POT 02					

TABLE 88A-2: INDIVIDUAL DATA FOR NBS SRM 88A (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Sr (ug/g)</u>					<u>U (ng/g)</u>				
41			XRF	76LEO 02	< 25000		L	ICPES	81CHU 01
41	0.8		ICPES	81CHU 01	300			ITNA	85POT 02
96			OES	75THO 01					
<u>Ta (ng/g)</u>					<u>V (ug/g)</u>				
30			ITNA	85POT 02	2.2			OES	84PLS 01
					9	1		ICPES	81CHU 01
<u>Tb (ng/g)</u>					<u>Y (ug/g)</u>				
50			ITNA	85POT 02	2.16	0.06		ICPES	85JAR 02
					2.3			XRF	76LEO 02
<u>Th (ng/g)</u>					<u>Yb (ng/g)</u>				
< 25000		L	ICPES	81CHU 01	150			ITNA	85POT 02
190			ITNA	85POT 02	170	10		ICPES	85JAR 02
					1200	40		ICPES	81CHU 01
<u>Ti (ug/g)</u>					<u>Zn (ug/g)</u>				
66	2		ICPES	81CHU 01	2.8			XRF	76LEO 02
180			EXRF	80DAL 01	4.1	1		ICPES	81CHU 01
					<u>Zr (ug/g)</u>				
					< 1		L	ICPES	81CHU 01
					6.6			XRF	76LEO 02

TABLE 91-1: COMPILED DATA FOR NBS SRM 91 OPAL GLASS (revised 3/1/86)

ELEMENT	UNITS	NBS Mean	CONSENSUS Mean \pm SD (n)	MEDIAN	RANGE	AA Mean (n)	NAA Mean (n)	OES Mean (n)	OTHER METHODS	
									Mean \pm SD	(n) Method
Al	%	2.81	3.21 (1)	---	---	---	---	---	3.21	(1) TCGS
As ₂ O ₃	ug/g	910	---	---	---	---	---	---	---	---
As ₂ O ₅	ug/g	1020	---	---	---	---	---	---	---	---
B	ug/g	---	302 (1)	---	---	---	---	302 (1)	---	---
Ba	ug/g	---	79 (1)	---	---	---	---	79 (1)	---	---
Ca	%	7.49	7.56 (2)	---	7.54 - 7.58	7.58 (1)	---	---	7.54	(1) TCGS
Cl	ug/g	140	167 (1)	---	---	---	---	---	167	(1) COLOR
Co	ug/g	---	4.5 (1)	---	---	---	---	4.5 (1)	---	---
Cr	ug/g	---	26 (2)	---	26 - 26	---	---	26 (2)	---	---
Cu	ug/g	---	16 (1)	---	---	---	---	16 (1)	---	---
F	%	5.73	5.58 \pm 0.23 (11)	5.62	5.1 - 5.81	---	5.39 (2)	---	5.67 \pm 0.08	(6) ISE
F	%	---	---	---	---	---	---	---	5.0	(2) IC
F	%	---	---	---	---	---	---	---	5.7	(1) CPAA
F	%	---	---	---	---	---	---	---	5.81	(1) COLOR
Fe	ug/g	570	2200 \pm 2200 (5)	700	430 - 5200	700 (1)	600 (1)	430 (1)	4000	(1) TCGS
Fe	ug/g	---	---	---	---	---	---	---	5200	(1) COLOR
Ga	ug/g	---	12 (1)	---	---	---	---	12 (1)	---	---
K	%	2.7	2.7 (2)	---	2.68 - 2.72	2.72 (1)	---	---	2.68	(1) TCGS
Mg	ug/g	---	60 (1)	---	---	---	---	---	60	(1) TCGS
Mn	ug/g	---	51 (2)	---	39 - 63	---	---	51 (2)	---	---
Na	%	6.29	6.26 \pm 0.06 (3)	6.23	6.22 - 6.32	6.22 (1)	6.23 (1)	---	6.32	(1) TCGS
Ni	ug/g	---	3.4 ? (2)	---	0.79 - 6	---	0.79 (1)	6 (1)	---	---
O	%	---	49.0 (1)	---	---	---	---	---	49.0	(1) 14NAA
P	ug/g	96	---	---	---	---	---	---	---	---
Pb	ug/g	900	580 ? (2)	---	17 - 1150	---	---	580 (2)	---	---
Si	%	31.54	31.9 \pm 0.4 (3)	32.1	31.5 - 32.2	31.5 (1)	32.2 (1)	---	32.1	(1) TCGS
Sr	ug/g	---	39 (1)	---	---	---	---	39 (1)	---	---
Ti	ug/g	110	135 \pm 23 (3)	140	110 - 156	---	---	148 (2)	110	(1) TCGS
U	ng/g	---	625 (2)	---	540 - 710	---	625 (2)	---	---	---
V	ug/g	---	43 (1)	---	---	---	---	43 (1)	---	---
Zn	ug/g	640	700 (1)	---	---	700 (1)	---	---	---	---
Zr	ug/g	70	47 (1)	---	---	---	---	47 (1)	---	---

TABLE 91-2: INDIVIDUAL DATA FOR NBS SRM 91 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Al (%)</u>					<u>Fe (ug/g)</u>				
3.21		35	TCGS	78GLA 04	430			OES	64FIL 01
					600		35	IENA	79GLA 03
<u>B (ug/g)</u>					700			AA	84SCH 01
302			OES	64FIL 01	4000		35	TCGS	78GLA 04
					5200	100		COLOR	59COL 01
<u>Ba (ug/g)</u>					<u>Ga (ug/g)</u>				
79			OES	72AVN 01	12			OES	72AVN 01
<u>Ca (%)</u>					<u>K (%)</u>				
7.54		35	TCGS	78GLA 04	2.68		35	TCGS	78GLA 04
7.58			AA	84SCH 01	2.72			AA	84SCH 01
<u>Cl (ug/g)</u>					<u>Mg (ug/g)</u>				
167	25		COLOR	85WHI 01	60		35	TCGS	78GLA 04
<u>Co (ug/g)</u>					<u>Mn (ug/g)</u>				
4.5			OES	72AVN 01	39			OES	64FIL 01
					63			OES	72AVN 01
<u>Cr (ug/g)</u>					<u>Na (%)</u>				
26			OES	64FIL 01	6.22			AA	84SCH 01
26			OES	72AVN 01	6.23		35	IENA	79GLA 03
<u>Cu (ug/g)</u>					6.32		35	TCGS	78GLA 04
16			OES	72AVN 01	<u>Ni (ug/g)</u>				
<u>F (%)</u>					0.79		35	IENA	79GLA 03
4.9	0.1		IC	83KEN 04	6			OES	72AVN 01
5.1			IC	82WIL 02	<u>O (%)</u>				
5.16		35	IENA	79GLA 03	49	0.6		14NAA	80NOR 01
5.55	0.09		ISE	85WHI 01	<u>Pb (ug/g)</u>				
5.6	0.16	11	ISE	77HOP 01	17			OES	64FIL 01
5.62	0.08		NAA	80NOR 01	1150			OES	72AVN 01
5.68	0.15		ISE	77TRO 01	<u>Si (%)</u>				
5.7		11	ISE	77HOP 01	31.5	1.21		AA	82KIS 01
5.7	0.07		CPAA	84HAN 01	32.1		35	TCGS	78GLA 04
5.72			ISE	70ING 01	32.2		35	IENA	79GLA 03
5.75	0.003		ISE	71PET 01					
5.81	0.21		COLOR	83CHA 02					

TABLE 91-2: INDIVIDUAL DATA FOR NBS SRM 91 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Sr (ug/g)</u>					<u>U (ng/g)</u>				
39			OES	72AVN 01	540			DNA	66HAM 01
<u>Ti (ug/g)</u>					710	60		DNA	86GAU 01
< 350		L	IENA	79GLA 03	<u>V (ug/g)</u>				
110		35	TCGS	78GLA 04	43			OES	72AVN 01
140			OES	72AVN 01	<u>Zn (ug/g)</u>				
156			OES	64FIL 01	700			AA	84SCH 01
					<u>Zr (ug/g)</u>				
					47			OES	64FIL 01

TABLE 92-1: COMPILED DATA FOR NBS SRM 92 SODA-LIME GLASS
(revised 3/1/86)

ELEMENT	UNITS	NBS Mean \pm SD	CONSENSUS Mean (n)	METHOD
B	ug/g	2180 \pm 90	---	---
Ca	%	5.9	5.88 (1)	MPOES
K	ug/g	5000	4810 (1)	MPOES
LOI	%	0.42	---	---
Mg	ug/g	600	---	---
Na	%	9.72	9.65 (1)	MPOES
Si	%	35	---	---
Zn	ug/g	1600	---	---

TABLE 93-1: COMPILED DATA FOR NBS SRM 93 BOROSILICATE GLASS
(revised 3/1/86)

ELEMENT	UNITS	NBS Mean	CONSENSUS Mean (n)	METHOD
Fe	ug/g	---	550 (1)	COLOR
Si	%	---	37.86 (1)	AA

TABLE 93A-1: COMPILED DATA FOR NBS SRM 93A: Borosilicate Glass
(revised 3/1/86)

ELEMENT	UNITS	NBS Mean
Al	%	1.21
B	%	3.9
Ca	ug/g	70
Cl	ug/g	600
Fe	ug/g	200
K	ug/g	120
Mg	ug/g	30
Na	%	2.95
Si	%	37.7
Ti	ug/g	84
Zr	ug/g	310

TABLE 92-2: INDIVIDUAL DATA FOR NBS SRM 92
(revised 3/1/86)

Conc	Uncer	Com	Method	Reference
<u>Ca (%)</u>				
5.88			MPOES	85ZHA 01
<u>K (ug/g)</u>				
4810			MPOES	85ZHA 01
<u>Na (%)</u>				
9.65			MPOES	85ZHA 01

TABLE 93-2: INDIVIDUAL DATA FOR NBS SRM 93
(revised 3/1/86)

Conc	Uncer	Com	Method	Reference
<u>Fe (ug/g)</u>				
550	10		COLOR	59COL 01
<u>Si (%)</u>				
37.86	0.84		AA	82KIS 01

TABLE 97-1: COMPILED DATA FOR NBS SRM 97 FLINT CLAY (revised 3/1/86)

ELE	UNITS	NBS Mean	CONSENSUS Mean \pm SD (n)	MEDIAN	RANGE	NAA Mean (n)	OTHER METHODS			
							Mean (n)	Method	Mean (n)	Method
Al	%	18.1	20.49 \pm 0.02 (3)	20.5	20.47 - 20.51	---	20.47 (1)	COLOR	20.5 (1)	TITR
Al	%	---	---	---	---	---	---	---	20.51 (1)	CHEM
B	ug/g	---	64 (2)	---	57 - 71.3	---	---	---	64.2 (2)	OES
Ba	ug/g	130	170 \pm 80 (3)	141	110 - 270	270 (1)	126 (2)	OES	---	---
Be	ug/g	---	1.3 (1)	---	---	---	---	---	1.3 (1)	OES
C	ug/g	---	3200 (1)	---	---	---	---	---	3200 (1)	CB
Ca	ug/g	720	---	---	---	---	---	---	---	---
Ce	ug/g	---	58.8 (2)	---	57 - 60.7	57 (1)	60.7 (1)	OES	---	---
Co	ug/g	---	3.7 \pm 0.6 (3)	3.46	3.3 - 4.4	3.85 (2)	3.46 (1)	OES	---	---
Cr	ug/g	540	550 \pm 60 (6)	540	486 - 639	578 (2)	486 (1)	OES	639 (1)	AA
Cr	ug/g	---	---	---	---	---	500 (1)	COLOR	540 (1)	CHEM
Cs	ug/g	---	2.4 (1)	---	---	2.4 (1)	---	---	---	---
Cu	ug/g	24	18 \pm 5 (4)	18.5	11 - 22	---	14.8 (2)	OES	20 (1)	CHEM
Cu	ug/g	---	---	---	---	---	---	---	22 (1)	COLOR
Dy	ug/g	---	4.28 (1)	---	---	---	---	---	4.28 (1)	OES
Eu	ug/g	---	1.4 (2)	---	1.24 - 1.56	1.24 (1)	1.56 (1)	OES	---	---
Fe	ug/g	6850	6660 \pm 130 (5)	6600	6500 - 6800	6600 (1)	6800 (1)	TITR	6550 (2)	COLOR
Fe	ug/g	---	---	---	---	---	6800 (1)	CHEM	---	---
Ga	ug/g	---	45.1 (1)	---	---	---	---	---	45.1 (1)	OES
Hf	ug/g	---	39.5 (1)	---	---	39.5 (1)	---	---	---	---
Hg	ng/g	---	110 (2)	---	68 - 159.2	---	110 (2)	AA	---	---
K	ug/g	4500	---	---	---	---	---	---	---	---
LOI	%	13.35	---	---	---	---	---	---	---	---
La	ug/g	---	34 (1)	---	---	34 (1)	---	---	---	---
Li	ug/g	1070	1074 (1)	---	---	---	---	---	1074 (1)	OES
Lu	ug/g	---	0.96 (1)	---	---	0.96 (1)	---	---	---	---
Mg	%	0.157	0.145 (2)	---	0.13 - 0.16	---	0.16 (1)	CHEM	0.13 (1)	COLOR
Mn	ug/g	15	50 \pm 44 (3)	35	16 - 99.7	---	67 (2)	OES	16 (1)	CHEM
Mo	ug/g	1.3	2.0 (1)	---	---	---	---	---	2.0 (1)	CHEM
Na	ug/g	520	---	---	---	---	---	---	---	---
Nb	ug/g	---	35.6 (1)	---	---	---	---	---	35.6 (1)	OES
Nd	ug/g	---	19 (1)	---	---	---	19 (1)	OES	---	---
Ni	ug/g	---	34.4 (2)	---	32 - 36.8	---	34.4 (2)	OES	---	---
P	ug/g	350	---	---	---	---	---	---	---	---
Pb	ug/g	---	34.6 (2)	---	34.3 - 35	---	34.3 (1)	OES	35 (1)	AA
Rb	ug/g	---	24 (1)	---	---	24 (1)	---	---	---	---
S	ug/g	170	176 \pm 22 (3)	170	158 - 200	---	200 (1)	TURB	164 (2)	CB
Sb	ug/g	---	1.4 (1)	---	---	1.4 (1)	---	---	---	---
Sc	ug/g	---	16.4 (2)	---	12.1 - 20.7	20.7 (1)	12.1 (1)	OES	---	---
Si	%	20.02	20.0 (1)	---	---	---	20 (1)	TITR	---	---
Sm	ug/g	---	5.8 (1)	---	---	5.8 (1)	---	---	---	---
Sn	ug/g	---	8.6 (2)	---	7 - 10.1	---	8.55 (2)	OES	---	---
Sr	ug/g	---	73 \pm 38 (3)	88	30 - 101	30 (1)	94.5 (2)	OES	---	---
Ta	ug/g	---	4.2 (1)	---	---	4.2 (1)	---	---	---	---
Tb	ug/g	---	1.27 (1)	---	---	1.27 (1)	---	---	---	---
Th	ug/g	---	37 (1)	---	---	37 (1)	---	---	---	---
Ti	%	1.42	1.39 \pm 0.08 (3)	1.43	1.3 - 1.43	---	1.3 (1)	COLOR	1.43 (1)	CHEM
Ti	%	---	---	---	---	---	1.43 (1)	TITR	---	---
V	ug/g	225	240 \pm 90 (4)	205	148 - 362	---	255 (2)	OES	205 (1)	COLOR
V	ug/g	---	---	---	---	---	234 (1)	CHEM	---	---
Y	ug/g	---	35.3 (2)	---	33 - 37.6	---	35.3 (2)	OES	---	---
Yb	ug/g	---	7.1 (2)	---	6.8 - 7.47	6.8 (1)	7.47 (1)	OES	---	---
Zn	ug/g	---	92 (2)	---	81 - 103	103 (1)	81 (1)	XRF	---	---
Zr	ug/g	1850	1390 (1)	---	---	1390 (1)	---	---	---	---

TABLE 97-2: INDIVIDUAL DATA FOR NBS SRM 97 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Al (%)</u>					<u>Cu (ug/g)</u>				
20.47			COLOR	57SHI 01	11			OES	64FIL 01
20.5	0.03		TITR	84DAS 01	18.5			OES	77FLA 01
20.51			CHEM	57SHI 01	20			CHEM	57SHI 01
					22			COLOR	57SHI 01
<u>B (ug/g)</u>					<u>Dy (ug/g)</u>				
57			OES	64FIL 01					
71.3			OES	77FLA 01	4.28			OES	77FLA 01
<u>Ba (ug/g)</u>					<u>Eu (ug/g)</u>				
110			OES	77FLA 01	1.24	0.03		ITNA	77FLA 01
141			OES	58GRA 01	1.56			OES	77FLA 01
270	21		ITNA	77FLA 01					
<u>Be (ug/g)</u>					<u>Fe (ug/g)</u>				
1.3			OES	77FLA 01	6500	100		COLOR	59COL 01
					6600			COLOR	57SHI 01
					6600	100		ITNA	77FLA 01
<u>C (ug/g)</u>					<u>Ga (ug/g)</u>				
3200			CB	78TER 01	6800			CHEM	57SHI 01
					6800	600		TITR	84DAS 01
<u>Ce (ug/g)</u>					<u>Hf (ug/g)</u>				
57	29		ITNA	77FLA 01	45.1			OES	77FLA 01
60.7			OES	77FLA 01					
<u>Co (ug/g)</u>					<u>Hg (ng/g)</u>				
3.3	0.06		ITNA	77FLA 01	39.5	1.19		ITNA	77FLA 01
3.46			OES	77FLA 01					
4.4			RTNA	61TUR 01	68			FAA	75HEI 01
					159.2	6.22		FAA	82FLA 01
<u>Cr (ug/g)</u>					<u>La (ug/g)</u>				
486			OES	77FLA 01					
500			COLOR	57SHI 01	<	14.7	L	OES	77FLA 01
540			CHEM	57SHI 01	34	0.71		ITNA	77FLA 01
576	14.4		ITNA	77FLA 01					
581			RTNA	61TUR 01	<u>Li (ug/g)</u>				
639			AA	80DON 01	1074			OES	77FLA 01
<u>Cs (ug/g)</u>					<u>Lu (ug/g)</u>				
2.4	0.08		ITNA	77FLA 01	0.96	0.02		ITNA	77FLA 01

TABLE 97-2: INDIVIDUAL DATA FOR NBS SRM 97 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Mg (%)</u>					<u>Si (%)</u>				
0.13			COLOR	57SHI 01	20			TITR	77OHL 01
0.16			CHEM	57SHI 01					
<u>Mn (ug/g)</u>					<u>Sm (ug/g)</u>				
16			CHEM	57SHI 01	<	4.64	L	OES	77FLA 01
35			OES	64FIL 01	5.8	0.08		ITNA	77FLA 01
99.7			OES	77FLA 01	<u>Sn (ug/g)</u>				
<u>Mo (ug/g)</u>					7			OES	64FIL 01
2			CHEM	57SHI 01	10.1			OES	77FLA 01
<u>Nb (ug/g)</u>					<u>Sr (ug/g)</u>				
35.6			OES	77FLA 01	30			RTNA	61TUR 01
<u>Nd (ug/g)</u>					88			OES	58GRA 01
19			ITNA	77FLA 01	101			OES	77FLA 01
<u>Ni (ug/g)</u>					<u>Ta (ug/g)</u>				
32			OES	64FIL 01	4.2	0.09		ITNA	77FLA 01
36.8			OES	77FLA 01	<u>Tb (ug/g)</u>				
<u>Pb (ug/g)</u>					1.27	0.02		ITNA	77FLA 01
34.3			OES	77FLA 01	<u>Th (ug/g)</u>				
35			FAA	79HEI 03	37	0.48		ITNA	77FLA 01
<u>Rb (ug/g)</u>					<u>Ti (%)</u>				
24	1.6		ITNA	77FLA 01	1.3			COLOR	57SHI 01
<u>S (ug/g)</u>					1.43			CHEM	57SHI 01
158			CB	78TER 01	1.43	0.03		TITR	84DAS 01
170			CB	55COL 01	<u>V (ug/g)</u>				
200			TURB	73SHA 01	148			OES	64FIL 01
<u>Sb (ug/g)</u>					205			COLOR	57SHI 01
1.4	0.11		ITNA	77FLA 01	234			CHEM	57SHI 01
<u>Sc (ug/g)</u>					362			OES	77FLA 01
12.1			OES	77FLA 01	<u>Y (ug/g)</u>				
20.7	0.17		ITNA	77FLA 01	33			OES	64FIL 01
					37.6			OES	77FLA 01

TABLE 97-2: INDIVIDUAL DATA FOR NBS SRM 97 (cont.)

Conc	Uncer	Com	Method	Reference	
<u>Yb (ug/g)</u>					
6.8	0.17		ITNA	77FLA 01	
7.47			OES	77FLA 01	
<u>Zn (ug/g)</u>					
81			XRF	65BAL 01	
103	3.15		ITNA	77FLA 01	
<u>Zr (ug/g)</u>					
1390	34.8		ITNA	77FLA 01	

TABLE 97A-1: COMPILED DATA FOR NBS SRM 97A FLINT CLAY (revised 3/1/86)

ELE	UNITS	NBS Mean	CONSENSUS		RANGE	NAA Mean (n)	OTHER METHODS			
			Mean \pm SD	(n)			Mean (n)	Method	Mean (n)	Method
Al	%	20.52	20.84	(1)	---	20.84 (1)	---		---	
As	ug/g	---	3.53	(1)	---	---	3.53 (1)	AA	---	
B	ug/g	---	69.4	(1)	---	---	69.4 (1)	OES	---	
Ba	ug/g	670	660	(1)	---	660 (1)	---		---	
Be	ug/g	---	3.4	(2)	3.2 - 3.55	---	3.55 (1)	OES	3.2 (1)	AA
Bi	ng/g	---	733	(1)	---	---	---		733 (1)	AA
C	ug/g	---	600	(1)	---	---	---		600 (1)	CB
Ca	ug/g	790	---		---	---	---		---	
Cd	ng/g	---	16	(1)	---	---	---		16 (1)	AA
Ce	ug/g	---	160	(2)	124 - 203	203 (1)	124 (1)	OES	---	
Co	ug/g	---	4.4	(2)	4.1 - 4.64	4.1 (1)	4.64 (1)	OES	---	
Cr	ug/g	200	190	(2)	180 - 203	180 (1)	203 (1)	OES	---	
Cs	ug/g	---	1.6	(1)	---	1.6 (1)	---		---	
Cu	ug/g	---	24.9	(1)	---	---	24.9 (1)	OES	---	
Dy	ug/g	---	8.89	(1)	---	---	8.89 (1)	OES	---	
Eu	ug/g	---	3.74	(2)	3.66 - 3.81	3.81 (1)	3.66 (1)	OES	---	
Fe	ug/g	3140	3000	(1)	---	3000 (1)	---		---	
Ga	ug/g	---	31.6	(1)	---	---	31.6 (1)	OES	---	
Hf	ug/g	---	13.4	(2)	11.3 - 15.4	13.35 (2)	---		---	
Hg	ng/g	---	388	(1)	---	---	---		388 (1)	AA
K	ug/g	4150	---		---	---	---		---	
LOI	%	13.32	---		---	---	---		---	
La	ug/g	---	73	(2)	43.7 - 103	103 (1)	43.7 (1)	OES	---	
Li	ug/g	510	439	(1)	---	---	439 (1)	OES	---	
Lu	ug/g	---	0.98	(1)	---	0.98 (1)	---		---	
Mg	ug/g	900	---		---	---	---		---	
Mn	ug/g	---	5.24	(1)	---	---	5.24 (1)	OES	---	
Na	ug/g	275	---		---	---	---		---	
Nb	ug/g	---	39	(1)	---	---	39 (1)	OES	---	
Nd	ug/g	---	88	(1)	---	88 (1)	---		---	
Ni	ug/g	---	81	(1)	---	---	81 (1)	OES	---	
P	ug/g	1570	845 ?	(2)	160 - 1530	---	160 (1)	ICPES	1530 (1)	COLOR
Pb	ug/g	---	40.15	(2)	38.6 - 41.7	---	41.7 (1)	OES	38.6 (1)	AA
Rb	ug/g	---	< 20		---	< 20	---		---	
S	ug/g	---	308	(1)	---	---	---		308 (1)	CB
Sb	ng/g	---	800	(2)	800 - 800	800 (1)	---		800 (1)	AA
Sc	ug/g	---	26	(2)	21.3 - 31.3	31.3 (1)	21.3 (1)	OES	---	
Si	%	20.39	20.7	(1)	---	20.7 (1)	---		---	
Sm	ug/g	---	14	(2)	6.88 - 21.3	21.3 (1)	6.88 (1)	OES	---	
Sn	ug/g	---	6.5 \pm 0.4	(3)	6.16 - 6.9	---	6.53 (1)	OES	6.53 (2)	AA
Sr	ug/g	1500	860	(1)	---	---	860 (1)	OES	---	
Ta	ug/g	---	3.21	(1)	---	3.21 (1)	---		---	
Tb	ug/g	---	2.77	(1)	---	2.77 (1)	---		---	
Th	ug/g	---	31.1	(1)	---	31.1 (1)	---		---	
Ti	%	1.14	---		---	---	---		---	
U	ug/g	---	6.58	(1)	---	6.58 (1)	---		---	
V	ug/g	---	362	(1)	---	---	362 (1)	OES	---	
Y	ug/g	---	121	(1)	---	---	121 (1)	OES	---	
Yb	ug/g	---	8.9	(2)	7.7 - 10.1	7.7 (1)	10.1 (1)	OES	---	
Zn	ug/g	---	< 20		---	< 20	---		---	
Zr	ug/g	470	522	(2)	465 - 580	522 (2)	---		---	

TABLE 97A-2: INDIVIDUAL DATA FOR NBS SRM 97A (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Al (%)</u>					<u>Cs (ug/g)</u>				
20.84	2		IENA	84CEL 01	1.6	0.6		ITNA	77FLA 01
<u>As (ug/g)</u>					<u>Cu (ug/g)</u>				
3.53			HAA	84TER 04	24.9			OES	77FLA 01
<u>B (ug/g)</u>					<u>Dy (ug/g)</u>				
69.4			OES	77FLA 01	8.89			OES	77FLA 01
<u>Ba (ug/g)</u>					<u>Eu (ug/g)</u>				
660	20.6		ITNA	77FLA 01	3.66			OES	77FLA 01
<u>Be (ug/g)</u>					3.81	0.02		ITNA	77FLA 01
3.2			AA	82TER 02	<u>Fe (ug/g)</u>				
3.2		D	AA	83TER 01	3000	30		ITNA	77FLA 01
3.55			OES	77FLA 01	<u>Ga (ug/g)</u>				
<u>Bi (ng/g)</u>					31.6			OES	77FLA 01
733		D	FAA	84TER 03	<u>Hf (ug/g)</u>				
733			HAA	84TER 02	11.3	0.39		ITNA	77FLA 01
<u>C (ug/g)</u>					15.4			ITNA	76GAN 01
600			CB	78TER 01	<u>Hg (ng/g)</u>				
<u>Cd (ng/g)</u>					387.5	22.5		FAA	82FLA 01
< 200			ICPES	83UCH 02	<u>La (ug/g)</u>				
16			AA	84TER 01	43.7			OES	77FLA 01
<u>Ce (ug/g)</u>					103	1.83		ITNA	77FLA 01
124			OES	77FLA 01	<u>Li (ug/g)</u>				
203	3.51		ITNA	77FLA 01	439			OES	77FLA 01
<u>Co (ug/g)</u>					<u>Lu (ug/g)</u>				
4.1	0.08		ITNA	77FLA 01	0.98	0.04		ITNA	77FLA 01
4.64			OES	77FLA 01	<u>Mn (ug/g)</u>				
<u>Cr (ug/g)</u>					5.24			OES	77FLA 01
180	4.1		ITNA	77FLA 01					
203			OES	77FLA 01					

TABLE 97A-2: INDIVIDUAL DATA FOR NBS SRM 97A (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Nb (ug/g)</u>					<u>Sn (ug/g)</u>				
39			OES	77FLA 01	6.16			AA	82TER 01
					6.53			OES	77FLA 01
<u>Nd (ug/g)</u>					6.9	0.28		FAA	85TER 01
88	3.7		ITNA	77FLA 01	<u>Sr (ug/g)</u>				
<u>Ni (ug/g)</u>					860			OES	77FLA 01
81			OES	77FLA 01	<u>Ta (ug/g)</u>				
<u>P (%)</u>					3.21	0.06		ITNA	77FLA 01
0.016	0.0001		ICPES	83UCH 01	<u>Tb (ug/g)</u>				
0.153	0.001		COLOR	83UCH 01	2.77	0.08		ITNA	77FLA 01
<u>Pb (ug/g)</u>					<u>Th (ug/g)</u>				
38.6			AA	84TER 01	31.1	0.37		ITNA	77FLA 01
41.7			OES	77FLA 01	<u>U (ug/g)</u>				
<u>Rb (ug/g)</u>					6.58			RTNA	76GAN 01
<	20	L	ITNA	77FLA 01	<u>V (ug/g)</u>				
<u>S (ug/g)</u>					362			OES	77FLA 01
308			CB	78TER 01	<u>Y (ug/g)</u>				
<u>Sb (ng/g)</u>					121			OES	77FLA 01
800			HAA	84TER 04	<u>Yb (ug/g)</u>				
800	100		ITNA	77FLA 01	7.7	0.23		ITNA	77FLA 01
<u>Sc (ug/g)</u>					10.1			OES	77FLA 01
21.3			OES	77FLA 01	<u>Zn (ug/g)</u>				
31.3	0.75		ITNA	77FLA 01	<	20	L	ITNA	77FLA 01
<u>Si (%)</u>					<u>Zr (ug/g)</u>				
20.7	1		IENA	84CEL 01	465	19		RTNA	76GAN 01
<u>Sm (ug/g)</u>					580	21		ITNA	77FLA 01
6.88			OES	77FLA 01					
21.3	0.69		ITNA	77FLA 01					

TABLE 98-1: COMPILED DATA FOR NBS SRM 98 PLASTIC CLAY (revised 3/1/86)

ELEMENT	UNITS	NBS Mean	CONSENSUS		MEDIAN	RANGE	NAA Mean (n)	OES		OTHER METHODS	
			Mean \pm SD	(n)				Mean \pm SD	(n)	Mean (n)	Method
Al	%	13.51	13.53 \pm 0.07	(5)	13.5	13.48 - 13.65	---	13.5	(1)	13.50 (2)	CHEM
Al	%	---	---	---	---	---	---	---	---	13.65 (1)	COLOR
Al	%	---	---	---	---	---	---	---	---	13.48 (1)	TITR
B	ug/g	---	140 \pm 80	(4)	78.5	68 - 250	---	140 \pm 80	(4)	---	---
Ba	ug/g	---	680 \pm 115	(3)	670	570 - 800	670 (1)	685	(2)	---	---
Be	ug/g	---	4.1	(1)	---	---	---	4.1	(1)	---	---
C	ug/g	---	4000	(1)	---	---	---	---	---	4000 (1)	CB
Ca	ug/g	1500	1530 \pm 60	(3)	1500	1500 - 1600	---	1500	(1)	1600 (1)	TITR
Ca	ug/g	---	---	---	---	---	---	---	---	1500 (1)	CHEM
Ce	ug/g	---	127	(2)	---	119 - 135	135 (1)	119	(1)	---	---
Co	ug/g	---	15.8 \pm 1.4	(5)	16.5	13.8 - 17	15.2 (2)	16.3 \pm 1.1	(3)	---	---
Cr	ug/g	140	138 \pm 18	(8)	136	113 - 170	122 (2)	135 \pm 16	(3)	170 (1)	COLOR
Cr	ug/g	---	---	---	---	---	---	---	---	144 (1)	CHEM
Cr	ug/g	---	---	---	---	---	---	---	---	143 (1)	AA
Cs	ug/g	---	10.7	(1)	---	---	10.7 (1)	---	---	---	---
Cu	ug/g	72	64 \pm 24	(6)	70	33.7 - 100	---	60 \pm 30	(4)	70 (1)	COLOR
Cu	ug/g	---	---	---	---	---	---	---	---	72 (1)	CHEM
Dy	ug/g	---	7.07	(1)	---	---	---	7.07	(1)	---	---
Eu	ug/g	---	1.90	(2)	---	1.74 - 2.07	1.74 (1)	2.07	(1)	---	---
Fe	%	1.43	1.32 \pm 0.13	(6)	1.38	1.12 - 1.43	1.4 (1)	1.17	(1)	1.39 (2)	COLOR
Fe	%	---	---	---	---	---	---	---	---	1.28 (2)	CHEM
Ga	ug/g	---	52	(2)	---	24.1 - 80	---	52	(2)	---	---
Hf	ug/g	---	7	(1)	---	---	7 (1)	---	---	---	---
Hg	ng/g	---	463	(1)	---	---	---	---	---	463 (1)	AA
K	%	2.63	---	---	---	---	---	---	---	---	---
LoI	%	7.28	---	---	---	---	---	---	---	---	---
La	ug/g	---	95 \pm 50	(3)	79	55.2 - 150	79 (1)	103	(2)	---	---
Li	ug/g	140	144	(1)	---	---	---	144	(1)	---	---
Lu	ng/g	---	650	(1)	---	---	650 (1)	---	---	---	---

TABLE 98-1: COMPILED DATA FOR NBS SRM 98 PLASTIC CLAY (cont.)

ELEMENT	UNITS	NBS Mean	CONSENSUS Mean \pm SD (n)	MEDIAN	RANGE	NAA Mean (n)	OES Mean \pm SD (n)	OTHER METHODS	
								Mean (n)	Method
Mg	ug/g	4340	4300 \pm 190 (5)	4300	4100 - 4600	---	4200 (1)	4300 (2)	CHEM
Mg	ug/g	---	---	---	---	---	---	4100 (1)	TITR
Mg	ug/g	---	---	---	---	---	---	4600 (1)	COLOR
Mn	ug/g	39	69 \pm 33 (6)	58.8	39 - 100	---	84 \pm 30 (4)	39.5 (2)	CHEM
Mo	ug/g	---	1.0 (1)	---	---	---	---	1.0 (1)	CHEM
Na	ug/g	1930	---	---	---	---	---	---	---
Nd	ug/g	---	49 (1)	---	---	49 (1)	---	---	---
Ni	ug/g	---	44 \pm 8 (3)	40	39 - 52.8	---	44 \pm 8 (3)	---	---
P	ug/g	350	370 (2)	---	350 - 390	---	---	370 (2)	COLOR
Pb	ug/g	---	44 (2)	---	40 - 47.5	---	44 (2)	---	---
Rb	ug/g	---	154 (1)	---	---	154 (1)	---	---	---
S	ug/g	280	270 \pm 25 (3)	270	250 - 300	---	---	260 (2)	CB
S	ug/g	---	---	---	---	---	---	300 (1)	TURB
Sb	ug/g	---	1.3 (1)	---	---	1.3 (1)	---	---	---
Sc	ug/g	---	25 \pm 4 (3)	27.09	22.1 - 30	22.9 (1)	26 (2)	---	---
Se	ug/g	---	1.20 \pm 0.16 (3)	1.2	1.04 - 1.37	---	---	1.04 (1)	FLUOR
Si	%	27.6	27.60 \pm 0.01 (3)	27.6	27.59 - 27.6	---	27.6 (1)	27.6 (1)	CHEM
Si	%	---	---	---	---	---	---	27.59 (1)	TITR
Sm	ug/g	---	8.3 (2)	---	6.3 - 10.3	10.3 (1)	6.3 (1)	---	---
Sn	ug/g	---	6.47 (1)	---	---	---	6.47 (1)	---	---
Sr	ug/g	---	290 \pm 70 (5)	300	205 - 390	205 (1)	310 \pm 70 (4)	---	---
Ta	ug/g	---	2.22 (1)	---	---	2.22 (1)	---	---	---
Tb	ug/g	---	1.35 (1)	---	---	1.35 (1)	---	---	---
Th	ug/g	---	19.5 (1)	---	---	19.5 (1)	---	---	---
Ti	ug/g	8560	9000 \pm 600 (6)	8690	8400 - 10000	---	9200 \pm 700 (3)	9300 (1)	COLOR
Ti	ug/g	---	---	---	---	---	---	8500 (2)	CHEM
V	ug/g	140	180 \pm 80 (8)	140	106 - 310	---	210 \pm 100 (5)	140 (2)	CHEM
V	ug/g	---	---	---	---	---	---	161 (1)	COLOR
Y	ug/g	---	38 \pm 9 (3)	40	28 - 46.7	---	38 \pm 9 (3)	---	---
Yb	ug/g	---	11 \pm 9 (3)	6.8	4.9 - 21.2	4.9 (1)	14 (2)	---	---
Zn	ug/g	---	125 (1)	---	---	125 (1)	---	---	---
Zr	ug/g	300	300 \pm 60 (6)	300	190 - 377	340 (1)	280 \pm 80 (4)	300 (1)	CHEM

TABLE 98-2: INDIVIDUAL DATA FOR NBS SRM 98 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Al (%)</u>					<u>Cr (ug/g)</u>				
13.48			TITR	58WAT 01	113	2.33		ITNA	77FLA 01
13.5			CHEM	62JOE 01	119			OES	64FIL 01
13.5			OES	62JOE 01	130			RTNA	61TUR 01
13.51			CHEM	57SHI 01	136			OES	77FLA 01
13.65			COLOR	57SHI 01	143			AA	80DON 01
					144			CHEM	57SHI 01
<u>B (ug/g)</u>					150		3	OES	63CLA 01
68			OES	64FIL 01	170			COLOR	57SHI 01
78.5			OES	77FLA 01	250		3	OES	63CLA 01
150		3	OES	63CLA 01	1400			CHEM	62JOE 01
250		3	OES	63CLA 01	1600			OES	62JOE 01
<u>Ba (ug/g)</u>					<u>Cs (ug/g)</u>				
570			OES	58GRA 01	10.7	0.17		ITNA	77FLA 01
670	10.8		ITNA	77FLA 01	<u>Cu (ug/g)</u>				
800			OES	63CLA 01	33.7			OES	77FLA 01
<u>Be (ug/g)</u>					39			OES	64FIL 01
4.1			OES	77FLA 01	70		3	OES	63CLA 01
<u>C (ug/g)</u>					70			COLOR	57SHI 01
4000			CB	78TER 01	72			CHEM	57SHI 01
<u>Ca (ug/g)</u>					100		3	OES	63CLA 01
1500			OES	62JOE 01	<u>Dy (ug/g)</u>				
1500			CHEM	62JOE 01	7.07			OES	77FLA 01
1600			TITR	80HIT 02	<u>Eu (ug/g)</u>				
<u>Ce (ug/g)</u>					1.74	0.02		ITNA	77FLA 01
119			OES	77FLA 01	2.07			OES	77FLA 01
135	1.32		ITNA	77FLA 01	<u>Fe (%)</u>				
<u>Co (ug/g)</u>					1.12			CHEM	62JOE 01
13.8	0.1		ITNA	77FLA 01	1.17			OES	62JOE 01
15			OES	63CLA 01	1.38	0.01		COLOR	59COL 01
16.5			RTNA	61TUR 01	1.4			COLOR	57SHI 01
16.9			OES	77FLA 01	1.4	0.05		ITNA	77FLA 01
17			OES	64FIL 01	1.43			CHEM	57SHI 01
					<u>Ga (ug/g)</u>				
					<	100	L	OES	63CLA 01
					24.1			OES	77FLA 01
					80		3	OES	63CLA 01

TABLE 98-2: INDIVIDUAL DATA FOR NBS SRM 98 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Hf (ug/g)</u>					<u>P (ug/g)</u>				
7	0.42		ITNA	77FLA 01	350		11	COLOR	76WHI 01
					390		11	COLOR	76WHI 01
<u>Hg (ng/g)</u>					<u>Pb (ug/g)</u>				
462.6	12.1		FAA	82FLA 01	40			OES	63CLA 01
<u>La (ug/g)</u>					47.5			OES	77FLA 01
55.2			OES	77FLA 01	<u>Rb (ug/g)</u>				
79	1.7		ITNA	77FLA 01	154	1.12		ITNA	77FLA 01
150			OES	63CLA 01	<u>S (ug/g)</u>				
<u>Li (ug/g)</u>					250			CB	78TER 01
144			OES	77FLA 01	270			CB	55COL 01
<u>Lu (ng/g)</u>					300			TURB	73SHA 01
650			ITNA	77FLA 01	<u>Sb (ug/g)</u>				
<u>Mg (ug/g)</u>					1.3	0.12		ITNA	77FLA 01
4100			TITR	80HIT 02	<u>Sc (ug/g)</u>				
4200			OES	62JOE 01	22.1			OES	77FLA 01
4300			CHEM	62JOE 01	22.9	0.06		ITNA	77FLA 01
4300			CHEM	57SHI 01	30			OES	63CLA 01
4600			COLOR	57SHI 01	<u>Se (ug/g)</u>				
<u>Mn (ug/g)</u>					1.04	0.08		FLUOR	74CRE 01
39			OES	64FIL 01	1.2			UU	74WAH 01
39			CHEM	57SHI 01	1.37			UU	65WEL 01
40			CHEM	62JOE 01	<u>Si (%)</u>				
96.5			OES	77FLA 01	27.59			TITR	77OHL 01
100		3	OES	63CLA 01	27.6			CHEM	62JOE 01
100		3	OES	63CLA 01	27.6			OES	62JOE 01
<u>Mo (ug/g)</u>					<u>Sm (ug/g)</u>				
< 1	1	L	OES	63CLA 01	6.3			OES	77FLA 01
1			CHEM	57SHI 01	10.3	0.42		ITNA	77FLA 01
<u>Nd (ug/g)</u>					<u>Sn (ug/g)</u>				
49	0.58		ITNA	77FLA 01	6.47			OES	77FLA 01
<u>Ni (ug/g)</u>									
39			OES	64FIL 01					
40			OES	63CLA 01					
52.8			OES	77FLA 01					

TABLE 98-2: INDIVIDUAL DATA FOR NBS SRM 98 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Sr (ug/g)</u>					<u>V (ug/g)</u>				
205			RTNA	61TUR 01	106			OES	64FIL 01
230			OES	58GRA 01	120			OES	62JOE 01
300			OES	63CLA 01	140			CHEM	62JOE 01
326			OES	77FLA 01	140			CHEM	57SHI 01
390			OES	75THO 01	161			COLOR	57SHI 01
<u>Ta (ug/g)</u>					200		3	OES	63CLA 01
2.22	0.03		ITNA	77FLA 01	300		3	OES	63CLA 01
<u>Tb (ug/g)</u>					310			OES	77FLA 01
1.35	0.02		ITNA	77FLA 01	<u>Y (ug/g)</u>				
<u>Th (ug/g)</u>					28			OES	64FIL 01
19.5	0.21		ITNA	77FLA 01	40			OES	63CLA 01
<u>Ti (ug/g)</u>					46.7			OES	77FLA 01
8400			CHEM	62JOE 01	<u>Yb (ug/g)</u>				
8600			CHEM	57SHI 01	4.9	0.1		ITNA	77FLA 01
8690			OES	62JOE 01	6.8			OES	77FLA 01
9000		3	OES	63CLA 01	21.2			OES	77FLA 01
9300			COLOR	57SHI 01	<u>Zn (ug/g)</u>				
10000		3	OES	63CLA 01	125	2.1		ITNA	77FLA 01
					<u>Zr (ug/g)</u>				
					190			OES	64FIL 01
					270			OES	62JOE 01
					300			OES	63CLA 01
					300			CHEM	62JOE 01
					340	19.6		ITNA	77FLA 01
					377			OES	77FLA 01

TABLE 98A-1: COMPILED DATA FOR NBS SRM 98A PLASTIC CLAY (revised 3/1/86)

ELEMENT	UNITS	NBS	CONSENSUS		RANGE	NAA	OES	OTHER METHODS	
		Mean	Mean ± SD	(n)		Mean (n)	Mean (n)	Mean (n)	Method
Al	%	17.56	17.42	(1)	---	17.42 (1)	---	---	
As	ug/g	---	11.4	(1)	---	---	---	11.4 (1)	AA
B	ug/g	---	120	(1)	---	---	120 (1)	---	
Ba	ug/g	270	320	(2)	168 - 480	480 (1)	168 (1)	---	
Be	ug/g	---	5.4	(2)	4.8 - 5.93	---	5.93 (1)	4.8 (1)	AA
Bi	ng/g	---	790	(1)	---	---	---	790 (1)	AA
C	ug/g	---	8100	(1)	---	---	---	8100 (1)	CB
Ca	ug/g	2200	---		---	---	---	---	
Cd	ng/g	---	47	(1)	---	---	---	47 (1)	AA
Ce	ug/g	---	200	(2)	180 - 219	219 (1)	180 (1)	---	
Co	ug/g	---	13	(2)	11.5 - 14.4	11.5 (1)	14.4 (1)	---	
Cr	ug/g	200	223	(2)	212 - 234	212 (1)	234 (1)	---	
Cs	ug/g	---	6.2	(1)	---	6.2 (1)	---	---	
Cu	ug/g	---	121	(1)	---	---	121 (1)	---	
Dy	ug/g	---	17.5	(1)	---	---	17.5 (1)	---	
Eu	ug/g	---	3.35	(2)	3.18 - 3.52	3.18 (1)	3.52 (1)	---	
Fe	ug/g	9370	8800	(1)	---	8800 (1)	---	---	
Ga	ug/g	---	23.3	(1)	---	---	23.3 (1)	---	
Hf	ug/g	---	7.3	(1)	---	7.3 (1)	---	---	
Hg	ng/g	---	39.3	(1)	---	---	---	39.3 (1)	AA
K	ug/g	8630	---		---	---	---	---	
LOI	%	12.44	---		---	---	---	---	
La	ug/g	---	130	(2)	91.7 - 162	162 (1)	91.7 (1)	---	
Li	ug/g	325	291	(1)	---	---	291 (1)	---	
Lu	ug/g	---	1.15	(1)	---	1.15 (1)	---	---	
Mg	ug/g	2500	---		---	---	---	---	
Mn	ug/g	---	41.4	(1)	---	---	41.4 (1)	---	
Na	ug/g	610	---		---	---	---	---	
Nb	ug/g	---	39.9	(1)	---	---	39.9 (1)	---	
Nd	ug/g	---	98	(1)	---	98 (1)	---	---	
Ni	ug/g	---	162	(1)	---	---	162 (1)	---	
P	ug/g	480	---		---	---	---	---	
Pb	ug/g	---	68	(2)	66.8 - 69.2	---	69.2 (1)	66.8 (1)	AA
Rb	ug/g	---	35	(1)	---	35 (1)	---	---	
S	ug/g	---	1300	(1)	---	---	---	1300 (1)	CB
Sb	ug/g	---	2.4	(2)	2.3 - 2.57	2.3 (1)	---	2.57 (1)	AA
Sc	ug/g	---	32	(2)	28.8 - 34.8	34.8 (1)	28.8 (1)	---	
Si	%	22.85	22.2	(1)	---	22.2 (1)	---	---	
Sm	ug/g	---	12	(2)	9.18 - 15	15 (1)	9.18 (1)	---	
Sn	ug/g	---	5.3 ± 0.4	(3)	4.88 - 5.76	---	4.88 (1)	5.50 (2)	AA
Sr	ug/g	330	438	(1)	---	---	438 (1)	---	
Ta	ug/g	---	2.46	(1)	---	2.46 (1)	---	---	
Tb	ug/g	---	2.92	(1)	---	2.92 (1)	---	---	
Th	ug/g	---	23.9	(1)	---	23.9 (1)	---	---	
Ti	%	0.964	---		---	---	---	---	
Tl	ng/g	---	351	(1)	---	---	---	351 (1)	ASV
V	ug/g	---	554	(1)	---	---	554 (1)	---	
Y	ug/g	---	176	(1)	---	---	176 (1)	---	
Yb	ug/g	---	9.8	(2)	9.3 - 10.3	9.3 (1)	10.3 (1)	---	
Zn	ug/g	---	< 23		---	< 23	---	---	
Zr	ug/g	---	740	(1)	---	740 (1)	---	---	

TABLE 98A-2: INDIVIDUAL DATA FOR NBS SRM 98A (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Al (%)</u>					<u>Cs (ug/g)</u>				
17.42	2.5		IENA	84CEL 01	6.2	0.06		ITNA	77FLA 01
<u>As (ug/g)</u>					<u>Cu (ug/g)</u>				
11.4			HAA	84TER 04	121			OES	77FLA 01
<u>B (ug/g)</u>					<u>Dy (ug/g)</u>				
120			OES	77FLA 01	17.5			OES	77FLA 01
<u>Ba (ug/g)</u>					<u>Eu (ug/g)</u>				
168			OES	77FLA 01	3.18	0.02		ITNA	77FLA 01
480	20		ITNA	77FLA 01	3.52			OES	77FLA 01
<u>Be (ug/g)</u>					<u>Fe (ug/g)</u>				
4.8		D	AA	83TER 01	8800	30		ITNA	77FLA 01
4.8			AA	82TER 02	<u>Ga (ug/g)</u>				
5.93			OES	77FLA 01	23.3			OES	77FLA 01
<u>Bi (ng/g)</u>					<u>Hf (ug/g)</u>				
790		D	FAA	84TER 03	7.3	0.14		ITNA	77FLA 01
790			HAA	84TER 02	<u>Hg (ng/g)</u>				
<u>C (ug/g)</u>					39.3	4.8		FAA	82FLA 01
8100			CB	78TER 01	<u>La (ug/g)</u>				
<u>Cd (ng/g)</u>					91.7			OES	77FLA 01
47			AA	84TER 01	162	2.99		ITNA	77FLA 01
<u>Ce (ug/g)</u>					<u>Li (ug/g)</u>				
180			OES	77FLA 01	291			OES	77FLA 01
219	0.29		ITNA	77FLA 01	<u>Lu (ug/g)</u>				
<u>Co (ug/g)</u>					1.15	0.06		ITNA	77FLA 01
11.5	0.06		ITNA	77FLA 01	<u>Mn (ug/g)</u>				
14.4			OES	77FLA 01	41.4			OES	77FLA 01
<u>Cr (ug/g)</u>									
212	4.8		ITNA	77FLA 01					
234			OES	77FLA 01					

TABLE 98A-2: INDIVIDUAL DATA FOR NBS SRM 98A

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Nb (ug/g)</u>					<u>Sr (ug/g)</u>				
39.9			OES	77FLA 01	438			OES	77FLA 01
<u>Nd (ug/g)</u>					<u>Ta (ug/g)</u>				
98	2.6		ITNA	77FLA 01	2.46	0.03		ITNA	77FLA 01
<u>Ni (ug/g)</u>					<u>Tb (ug/g)</u>				
162			OES	77FLA 01	2.92	0.06		ITNA	77FLA 01
<u>Pb (ug/g)</u>					<u>Th (ug/g)</u>				
66.8			AA	84TER 01	23.9	0.11		ITNA	77FLA 01
69.2			OES	77FLA 01	<u>Tl (ng/g)</u>				
<u>Rb (ug/g)</u>					351	40	7	ASV	82CAL 01
35	2.3		ITNA	77FLA 01	<u>V (ug/g)</u>				
<u>S (ug/g)</u>					554			OES	77FLA 01
1300			CB	78TER 01	<u>Y (ug/g)</u>				
<u>Sb (ug/g)</u>					176			OES	77FLA 01
2.3	0.1		ITNA	77FLA 01	<u>Yb (ug/g)</u>				
2.57			HAA	84TER 04	9.3	0.29		ITNA	77FLA 01
<u>Sc (ug/g)</u>					10.3			OES	77FLA 01
28.8			OES	77FLA 01	<u>Zn (ug/g)</u>				
34.8	0.21		ITNA	77FLA 01	<	23	L	ITNA	77FLA 01
<u>Si (%)</u>					<u>Zr (ug/g)</u>				
22.2	1.2		IENA	84CEL 01	740	32		ITNA	77FLA 01
<u>Sm (ug/g)</u>									
9.18			OES	77FLA 01					
15	2.4		ITNA	77FLA 01					
<u>Sn (ug/g)</u>									
4.88			OES	77FLA 01					
5.25			AA	82TER 01					
5.76	0.3		FAA	85TER 01					

TABLE 99-1: COMPILED DATA FOR NBS SRM 99 SODA FELDSPAR (revised 3/1/86)

ELE	UNITS	NBS Mean	CONSENSUS Mean \pm SD (n)	MEDIAN	RANGE	NAA Mean (n)	OES Mean \pm SD (n)	OTHER METHODS Mean (n) Method
Al	%	10.08	10.07 (1)	---	---	---	---	10.07 (1) TITR
B	ug/g	---	10 (1)	---	---	---	10 (1)	---
Ba	ug/g	90	< 130	---	---	< 130	< 800	---
Ca	ug/g	2570	---	---	---	---	---	---
Ce	ug/g	---	8 (1)	---	---	8 (1)	---	---
Co	ng/g	---	740 (2)	---	700 - 780	740 (2)	---	---
Cr	ug/g	---	7.2 \pm 5.1 (3)	8.51	3.3 - 13	4.3 (2)	13 (1)	---
Cs	ng/g	---	700 (1)	---	---	700 (1)	---	---
Cu	ug/g	---	21 (2)	---	20 - 22	---	21 (2)	---
Eu	ng/g	---	350 (1)	---	---	350 (1)	---	---
Fe	ug/g	470	500 (1)	---	---	500 (1)	---	---
Ga	ug/g	---	30 (1)	---	---	---	30 (1)	---
Hf	ng/g	---	900 (1)	---	---	900 (1)	---	---
K	ug/g	3400	---	---	---	---	---	---
LOI	%	0.52	---	---	---	---	---	---
La	ug/g	---	< 8	---	---	< 8	< 100	---
Lu	ng/g	---	< 200	---	---	< 200	---	---
Mg	ug/g	320	---	---	---	---	---	---
Mn	ug/g	< 70	31 (2)	---	12 - 50	---	31 (2)	---
Na	%	7.96	7.94 (1)	---	---	---	---	7.94 (1) XRF
Nd	ug/g	---	< 4	---	---	< 4	---	---
Ni	ug/g	---	15 (1)	---	---	---	15 (1)	---
P	ug/g	620	567 (1)	---	---	---	567 (1)	---
Pb	ug/g	---	106 (2)	---	62 - 150	---	106 (2)	---
Rb	ug/g	---	23 (1)	---	---	23 (1)	---	---
Sb	ng/g	---	500 (1)	---	---	500 (1)	---	---
Sc	ng/g	---	830 (1)	---	---	830 (1)	---	---
Si	%	32.06	32.05 (2)	---	32.05 - 32.05	---	---	32.05 (1) TITR
Si	%	---	---	---	---	---	---	32.05 (1) COLOR
Sm	ug/g	---	< 2	---	---	< 2	---	---
Sr	ug/g	---	220 \pm 160 (3)	130	120 - 400	120 (1)	265 (2)	---
Ta	ug/g	---	1.9 (1)	---	---	1.9 (1)	---	---
Tb	ng/g	---	280 (1)	---	---	280 (1)	---	---
Th	ug/g	---	1.6 (1)	---	---	1.6 (1)	---	---
Ti	ug/g	100	240 \pm 220 (4)	68	61 - 560	---	140 \pm 70 (3)	560 (1) COLOR
U	ug/g	---	1.09 (1)	---	---	1.09 (1)	---	---
V	ug/g	---	< 10	---	---	---	< 10	---
Y	ug/g	---	10 (1)	---	---	---	10 (1)	---
Yb	ug/g	---	1 (1)	---	---	1 (1)	---	---
Zn	ug/g	---	15.9 \pm 1.8 (3)	15	14.6 - 18	16.3 (2)	---	---
Zr	ug/g	---	26 (2)	---	11 - 40	---	---	---

TABLE 99-2: INDIVIDUAL DATA FOR NBS SRM 99 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Al (%)</u>					<u>Hf (ng/g)</u>				
10.07			TITR	58WAT 01	900	60		ITNA	77FLA 01
<u>B (ug/g)</u>					<u>La (ug/g)</u>				
10			OES	63CLA 01	<	8	L	ITNA	77FLA 01
<u>Ba (ug/g)</u>					<	100	L	OES	63CLA 01
<	130	L	ITNA	77FLA 01	<u>Lu (ng/g)</u>				
<	800	L	OES	63CLA 01	<	200	L	ITNA	77FLA 01
<u>Ce (ug/g)</u>					<u>Mn (ug/g)</u>				
8	0.6		ITNA	77FLA 01	12			OES	64FIL 01
<u>Co (ng/g)</u>					50			OES	63CLA 01
<	10000	L	OES	63CLA 01	<u>Na (%)</u>				
700	30		ITNA	77FLA 01	7.94			WXRF	83BAL 01
780	120		RTNA	61TUR 01	<u>Nd (ug/g)</u>				
<u>Cr (ug/g)</u>					<	4	L	ITNA	77FLA 01
<	20	L	OES	63CLA 01	<u>Ni (ug/g)</u>				
3.3	0.16		ITNA	77FLA 01	15			OES	63CLA 01
5.3			RTNA	61TUR 01	<u>P (ug/g)</u>				
13			OES	64FIL 01	567			OES	64FIL 01
<u>Cs (ng/g)</u>					<u>Pb (ug/g)</u>				
700	100		ITNA	77FLA 01	62			OES	64FIL 01
<u>Cu (ug/g)</u>					150			OES	63CLA 01
20			OES	63CLA 01	<u>Rb (ug/g)</u>				
22			OES	64FIL 01	23	1.6		ITNA	77FLA 01
<u>Eu (ng/g)</u>					<u>Sb (ng/g)</u>				
350			ITNA	77FLA 01	500	60		ITNA	77FLA 01
<u>Fe (ug/g)</u>					<u>Sc (ng/g)</u>				
500			ITNA	77FLA 01	<	10000	L	OES	63CLA 01
<u>Ga (ug/g)</u>					830	10		ITNA	77FLA 01
30			OES	63CLA 01					

TABLE 99-2: INDIVIDUAL DATA FOR NBS SRM 99 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Si (%)</u>					<u>U (ug/g)</u>				
32.05			COLOR	82SAR 01	1.09			DNA	66HAM 01
32.05	0.01		TITR	77OHL 01					
<u>Sm (ug/g)</u>					<u>V (ug/g)</u>				
<	2	L	ITNA	77FLA 01	<	10	L	OES	63CLA 01
<u>Sr (ug/g)</u>					<u>Y (ug/g)</u>				
120			RTNA	61TUR 01	10			OES	63CLA 01
130			OES	75THO 01					
400			OES	63CLA 01					
<u>Ta (ug/g)</u>					<u>Yb (ug/g)</u>				
1.9	0.02		ITNA	77FLA 01	1	0.06		ITNA	77FLA 01
<u>Tb (ng/g)</u>					<u>Zn (ug/g)</u>				
280	6		ITNA	77FLA 01	14.6			RTNA	65BAL 01
					15			XRF	65BAL 01
					18	0.82		ITNA	77FLA 01
<u>Th (ug/g)</u>					<u>Zr (ug/g)</u>				
1.6	0.03		ITNA	77FLA 01	<	100	L	ITNA	77FLA 01
					11			OES	64FIL 01
					40			OES	63CLA 01
<u>Ti (ug/g)</u>									
61			OES	64FIL 01					
150		3	OES	63CLA 01					
200		3	OES	63CLA 01					
560			COLOR	63KOR 01					

TABLE 99A-1: COMPILED DATA FOR NBS SRM 99A SODA FELDSPAR (revised 3/1/86)

ELE	UNITS	NBS Mean	CONSENSUS Mean \pm SD (n)	MEDIAN	RANGE	AA Mean (n)	NAA Mean (n)	OTHER METHODS Mean (n) Method
Al	%	10.8	---	---	---	---	---	---
Ba	ug/g	2330	2570 (1)	---	---	---	2570 (1)	---
Be	ug/g	---	2.02 (1)	---	---	2.02 (1)	---	---
Bi	ng/g	---	3 (1)	---	---	3 (1)	---	---
C	ug/g	---	300 (1)	---	---	---	---	300 (1) CB
Ca	%	1.53	1.51 (1)	---	---	1.51 (1)	---	---
Cd	ng/g	---	< 200	---	---	---	---	---
Ce	ug/g	---	5 (1)	---	---	---	5 (1)	---
Co	ng/g	---	100 (1)	---	---	---	100 (1)	---
Cr	ug/g	---	< 3	---	---	---	< 3	---
Cs	ug/g	---	5 ? (2)	---	0.5 - 9	9 (1)	0.5 (1)	---
Eu	ng/g	---	820 (1)	---	---	---	820 (1)	---
Fe	ug/g	450	475 (2)	---	450 - 500	450 (1)	500 (1)	---
Hf	ng/g	---	300 (1)	---	---	---	300 (1)	---
Hg	ng/g	---	165 (1)	---	---	165 (1)	---	---
K	%	4.3	4.27 \pm 0.12 (3)	4.2	4.2 - 4.4	4.4 (1)	---	4.2 (1) FE
K	%	---	---	---	---	---	---	4.2 (1) ISE
LOI	%	0.26	---	---	---	---	---	---
La	ug/g	---	22 (1)	---	---	---	22 (1)	---
Lu	ng/g	---	< 100	---	---	---	< 100	---
Mg	ug/g	120	130 (1)	---	---	130 (1)	---	---
Na	%	4.6	4.55 \pm 0.09 (3)	4.6	4.45 - 4.6	4.45 (1)	---	4.6 (1) ISE
Na	%	---	---	---	---	---	---	4.6 (1) FE
Nd	ug/g	---	< 4	---	---	---	< 4	---
P	ug/g	87	55 (2)	---	50 - 60	---	---	60 (1) COLOR
Rb	ug/g	---	104 (2)	---	100 - 109	100 (1)	109 (1)	---
S	ug/g	---	19 (1)	---	---	---	---	---
Sb	ng/g	---	< 300	---	---	---	< 300	---
Sc	ng/g	---	230 (1)	---	---	---	230 (1)	---
Si	%	30.4	30.42 (1)	---	---	30.42 (1)	---	---
Sm	ng/g	---	500 (1)	---	---	---	500 (1)	---
Sn	ug/g	---	0.45 (1)	---	---	---	---	---
Ta	ng/g	---	< 200	---	---	---	< 200	---
Tb	ng/g	---	< 200	---	---	---	< 200	---
Th	ng/g	---	500 (1)	---	---	---	500 (1)	---
Ti	ug/g	42	---	---	---	---	---	---
Yb	ng/g	---	< 300	---	---	---	< 300	---
Zn	ug/g	---	< 7	---	---	---	< 7	---
Zr	ug/g	---	70 (1)	---	---	---	70 (1)	---

TABLE 99A-2: INDIVIDUAL DATA FOR NBS SRM 99A (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ba (ug/g)</u>					<u>Hf (ng/g)</u>				
2570	38.6		ITNA	77FLA 01	300	30		ITNA	77FLA 01
<u>Be (ng/g)</u>					<u>Hg (ng/g)</u>				
2020			AA	83TER 01	164.6	7.35		FAA	82FLA 01
<u>Bi (ng/g)</u>					<u>K (%)</u>				
3			FAA	84TER 03	4.2			FE	75PUF 01
<u>C (ug/g)</u>					4.2	0.13		ISE	75PUF 01
300			CB	78TER 01	4.4			AA	73RAM 01
<u>Ca (%)</u>					<u>La (ug/g)</u>				
1.51			AA	73RAM 01	22	1.9		ITNA	77FLA 01
<u>Cd (ng/g)</u>					<u>Lu (ng/g)</u>				
<	200		ICPES	83UCH 02	<	100	L	ITNA	77FLA 01
<u>Ce (ug/g)</u>					<u>Mg (ug/g)</u>				
5	0.29		ITNA	77FLA 01	130			AA	73RAM 01
<u>Co (ng/g)</u>					<u>Na (%)</u>				
100			ITNA	77FLA 01	4.45			AA	73RAM 01
<u>Cr (ug/g)</u>					4.6			FE	75PUF 01
<	3	L	ITNA	77FLA 01	4.6	0.1		ISE	75PUF 01
<u>Cs (ug/g)</u>					<u>Nd (ug/g)</u>				
0.5	0.03		ITNA	77FLA 01	<	4	L	ITNA	77FLA 01
9			AA	72ALL 01	<u>P (%)</u>				
<u>Eu (ng/g)</u>					0.005	0.0001		ICPES	83UCH 01
820	4		ITNA	77FLA 01	0.006	0.0002		COLOR	83UCH 01
<u>Fe (ug/g)</u>					<u>Rb (ug/g)</u>				
450			AA	73RAM 01	100			AA	72ALL 01
500			ITNA	77FLA 01	109	1.2		ITNA	77FLA 01
					<u>S (ug/g)</u>				
					19			CB	78TER 01

TABLE 99A-2: INDIVIDUAL DATA FOR NBS SRM 99A

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Sb (ng/g)</u>					<u>Ta (ng/g)</u>				
<	300	L	ITNA	77FLA 01	<	200	L	ITNA	77FLA 01
<u>Sc (ng/g)</u>					<u>Tb (ng/g)</u>				
230			ITNA	77FLA 01	<	200	L	ITNA	77FLA 01
<u>Si (%)</u>					<u>Th (ng/g)</u>				
30.42	0.4		AA	82KIS 01	500			ITNA	77FLA 01
<u>Sm (ng/g)</u>					<u>Yb (ng/g)</u>				
500	70		ITNA	77FLA 01	<	300	L	ITNA	77FLA 01
<u>Sn (ug/g)</u>					<u>Zn (ug/g)</u>				
0.45			AA	82TER 01	<	7	L	ITNA	77FLA 01
					<u>Zr (ug/g)</u>				
					70			ITNA	77FLA 01

TABLE 120A-1: COMPILED DATA ON NBS SRM 120A PHOSPHATE ROCK (revised 3/1/86)

ELEMENT	UNITS	NBS	CONSENSUS		MEDIAN	RANGE	ICPES		OTHER METHODS	
		Mean	Mean ± SD	(n)			Mean	(n)	Mean ± SD	(n) Method
Al	ug/g	5000	4500	(1)	---	---	4500	(1)	---	
Be	ug/g	---	1.88	(1)	---	---	---		1.88	(1) AA
C	%	---	1.04	(1)	---	---	---		1.04	(1) CB
C-inorg	ug/g	8700	---		---	---	---		---	
Ca	%	36	36.06	(2)	---	36.02 - 36.1	36.1	(1)	36.02	(1) TITR
Cd	ug/g	---	11.8	(1)	---	---	---		11.8	(1) AA
F	%	3.92	3.90 ± 0.10	(7)	3.88	3.8 - 4.04	---		3.88 ± 0.09	(5) ISE
F	%	---	---		---	---	---		4.04	(1) CPAA
F	%	---	---		---	---	---		3.82	(1) COLOR
Fe	ug/g	6990	7340	(1)	---	---	7340	(1)	---	
Hg	ng/g	---	57.5	(1)	---	---	---		57.5	(1) AA
K	ug/g	830	---		---	---	---		---	
Mg	ug/g	1600	1400	(1)	---	---	1400	(1)	---	
Mn	ug/g	150	160	(1)	---	---	160	(1)	---	
Na	ug/g	3000	---		---	---	---		---	
P	%	15	---		---	---	---		---	
Pb	ug/g	---	9.3	(1)	---	---	---		9.3	(1) AA
S	ug/g	---	2900	(1)	---	---	---		2900	(1) CB
Ti	ug/g	720	720	(1)	---	---	720	(1)	---	
U	ug/g	---	110	(1)	---	---	---		110	(1) COLOR

TABLE 120A-2: INDIVIDUAL DATA FOR NBS SRM 120A (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Al (ug/g)</u>					<u>Fe (ug/g)</u>				
4500			ICPES	80BRE 01	7340			ICPES	80BRE 01
<u>Be (ug/g)</u>					<u>Hg (ng/g)</u>				
1.88			AA	83TER 01	57.5	3.6		FAA	82FLA 01
<u>C (%)</u>					<u>Mg (ug/g)</u>				
1.04			CB	78TER 01	1400			ICPES	80BRE 01
<u>Ca (%)</u>					<u>Mn (ug/g)</u>				
36.02			TITR	80HIT 02	160			ICPES	80BRE 01
36.1			ICPES	80BRE 01	<u>Pb (ug/g)</u>				
<u>Cd (ug/g)</u>					9.3			AA	84TER 01
11.8			AA	84TER 01	<u>S (ug/g)</u>				
<u>F (%)</u>					2900			CB	78TER 01
3.8		11	ISE	69EDM 01	<u>Ti (ug/g)</u>				
3.8	0.1		ISE	77HOP 01	720			ICPES	80BRE 01
3.82	0.05		COLOR	83CHA 02	<u>U (ug/g)</u>				
3.88		11	ISE	69EDM 01	110	10		COLOR	810GU 01
3.93		11	ISE	71PET 01					
4.01		11	ISE	71PET 01					
4.04			CPAA	85ROE 01					

TABLE 120B-1: COMPILED DATA FOR NBS SRM 120B PHOSPHATE ROCK (revised 3/1/86)

ELEMENT	UNITS	NBS Mean	CONSENSUS		MEDIAN	RANGE	AA		NAA		ICPES		OTHER METHODS	
			Mean \pm SD	(n)			Mean	(n)	Mean	(n)	Mean \pm SD	(n)	Mean	(n) Method
Ag	ug/g	---	5	(1)	---	---	---	---	---	---	5	(1)	---	---
Al	ug/g	5600	5790 \pm 350	(8)	5980	5100 - 6000	5100	(1)	---	---	5880 \pm 240	(6)	6000	(1) TCGS
As	ug/g	---	5.52	(1)	---	---	5.52	(1)	---	---	---	---	---	---
Au	ug/g	---	< 3	---	---	---	---	---	---	---	< 3	---	---	---
Ba	ug/g	---	61	(1)	---	---	---	---	---	---	61	(1)	---	---
Be	ug/g	---	2.86	(2)	---	2.82 - 2.9	2.82	(1)	---	---	2.9	(1)	---	---
Bi	ng/g	---	197	(1)	---	---	197	(1)	---	---	---	---	---	---
C	%	---	1.39	(2)	---	0.983 - 1.8	---	---	---	---	---	---	1.8	(1) SIMS
C	%	---	---	---	---	---	---	---	---	---	---	---	0.983	(1) CB
C-inorg	ug/g	7600	---	---	---	---	---	---	---	---	---	---	---	---
Ca	%	35.32	34.4 \pm 1.1	(9)	35.06	32.7 - 35.41	33.98	(1)	---	---	35.0 \pm 0.6	(6)	32.7	(1) TCGS
Cd	ug/g	18	22 \pm 3	(3)	22	20.1 - 25.3	22.7	(2)	---	---	22	(1)	---	---
Ce	ug/g	---	115 \pm 14	(3)	118	100 - 128	---	---	100	(1)	123	(2)	---	---
Co	ug/g	---	2.85	(2)	---	2.7 - 3	---	---	2.7	(1)	3	(1)	---	---
Cr	ug/g	---	59.6	(2)	---	56 - 63.1	---	---	56	(1)	63.1	(1)	---	---
Cu	ug/g	---	9.95	(2)	---	8.6 - 11.3	11.3	(1)	---	---	8.6	(1)	---	---
Dy	ug/g	---	17.2	(2)	---	17 - 17.3	---	---	---	---	17.15	(2)	---	---
Er	ug/g	---	11.7	(2)	---	11.4 - 12	---	---	---	---	11.7	(2)	---	---
Eu	ug/g	---	3.6 \pm 0.2	(3)	3.5	3.5 - 3.89	---	---	3.5	(1)	3.7	(2)	---	---
F	%	3.84	3.89 \pm 0.10	(5)	3.89	3.78 - 4.04	---	---	3.8	(2)	---	---	3.93	(1) CPAA
F	%	---	---	---	---	---	---	---	---	---	---	---	4.04	(1) ISE
F	%	---	---	---	---	---	---	---	---	---	---	---	3.89	(1) IC
Fe	ug/g	7700	7350 \pm 480	(12)	7400	6570 - 7970	7214	(2)	7135	(2)	7350 \pm 350	(6)	7400	(1) TCGS
Gd	ug/g	---	18.9 \pm 1.8	(3)	18	17.8 - 21	---	---	---	---	18.9 \pm 1.8	(3)	---	---
Hf	ug/g	---	2	(1)	---	---	---	---	2	(1)	---	---	---	---
Ho	ug/g	---	3.92	(2)	---	3.8 - 4.03	---	---	---	---	3.92	(2)	---	---
K	ug/g	1000	705 \pm 91	(4)	660	600 - 800	800	(1)	---	---	600	(1)	760	(1) SIMS
La	ug/g	---	88 \pm 6	(4)	89	79 - 92.8	---	---	79	(1)	91 \pm 2	(3)	---	---
Li	ug/g	---	< 2	---	---	---	---	---	---	---	< 2	---	---	---
Lu	ug/g	---	1.70 \pm 0.10	(3)	1.71	1.6 - 1.8	---	---	1.8	(1)	1.66	(2)	---	---

TABLE 120B-1: COMPILED DATA FOR NBS SRM 120B PHOSPHATE ROCK (cont.)

ELEMENT	UNITS	NBS Mean	CONSENSUS Mean \pm SD (n)	MEDIAN	RANGE	AA		NAA		ICPES		OTHER METHODS	
						Mean	(n)	Mean	(n)	Mean \pm SD	(n)	Mean	(n) Method
Mg	ug/g	1700	1695 \pm 90 (7)	1700	1600 - 1870	1600	(1)	---	---	1710 \pm 90	(6)	---	---
Mn	ug/g	250	244 \pm 12 (4)	240	230 - 260	243	(2)	---	---	245	(2)	---	---
Mo	ug/g	---	< 5	---	---	---	---	---	---	< 5	---	---	---
Na	ug/g	2600	2660 \pm 260 (4)	2630	2300 - 2900	2300	(1)	---	---	2630	(1)	2800 (1) TCGS	---
Na	ug/g	---	---	---	---	---	---	---	---	---	---	2900 (1) SIMS	---
Nd	ug/g	---	75 \pm 6 (3)	77	68 - 79.5	---	---	68	(1)	78.25	(2)	---	---
Ni	ug/g	---	17 \pm 6 (3)	15.4	12 - 22.9	22.9	(1)	12	(1)	15.4	(1)	---	---
O	%	---	36	---	---	---	---	---	---	---	---	36 (1) 14NAA	---
P	%	15.07	15.06 \pm 0.18 (7)	15.12	14.7 - 15.21	---	---	---	---	15.12 \pm 0.10	(6)	14.7 (1) TCGS	---
Pb	ug/g	---	24 \pm 10 (3)	25	13.1 - 32.7	22.9	(2)	---	---	25	(1)	---	---
Pr	ug/g	---	17.4 (2)	---	17 - 17.9	---	---	---	---	17.45	(2)	---	---
Ra-226	pCi/g	---	43.3 (1)	---	---	---	---	---	---	---	---	43.3 (1) GAMMA	---
S	ug/g	---	2200 (1)	---	---	---	---	---	---	---	---	---	---
Sb	ug/g	---	5.81 (2)	---	1.62 - 10	1.62	(1)	---	---	10	(1)	---	---
Sc	ug/g	---	6.4 (1)	---	---	---	---	6.4	(1)	---	---	---	---
Se	ug/g	---	< 30	---	---	---	---	---	---	< 30	---	---	---
Si	%	2.18	2.22 \pm 0.12 (10)	2.21	2.01 - 2.41	2.31	(2)	2.12	(1)	2.24 \pm 0.08	(5)	2.19 (1) TCGS	---
Sm	ug/g	---	23 \pm 13 (3)	16	15.8 - 38	---	---	---	---	23 \pm 13	(3)	---	---
Sn	ug/g	---	0.41 (1)	---	---	0.41	(1)	---	---	---	---	---	---
Sr	ug/g	---	705 (1)	---	---	---	---	---	---	705	(1)	---	---
Ta	ng/g	---	200 (1)	---	---	---	---	200	(1)	---	---	---	---
Tb	ug/g	---	2 (1)	---	---	---	---	2	(1)	---	---	---	---
Th	ug/g	---	8.0 \pm 0.9 (3)	7.9	7.2 - 9.05	---	---	7.2	(1)	---	---	8.475 (2) AS	---
Ti	ug/g	900	870 \pm 100 (5)	950	740 - 950	---	---	780	(1)	880 \pm 120	(3)	950 (1) TCGS	---
Tm	ug/g	---	1.1 (1)	---	---	---	---	1.1	(1)	---	---	---	---
U	ug/g	128.4 \pm 0.5	132 \pm 5 (5)	130.25	125.7 - 140	---	---	132.85	(2)	130.25	(1)	131 (2) AS	---
U-238	pCi/g	---	42.8 (1)	---	---	---	---	---	---	---	---	42.8 (1) GAMMA	---
V	ug/g	---	170 \pm 100 (3)	120	103 - 280	280	(1)	---	---	111.5	(2)	---	---
Y	ug/g	---	172 (1)	---	---	---	---	---	---	172	(1)	---	---
Yb	ug/g	---	10.9 \pm 1.2 (4)	10.2	10 - 12.7	---	---	10.2	(1)	11.2 \pm 1.4	(3)	---	---
Zn	ug/g	---	117 (2)	---	107 - 127	107	(1)	---	---	127	(1)	---	---
Zr	ug/g	---	12 (1)	---	---	---	---	---	---	12	(1)	---	---

TABLE 120B-2: INDIVIDUAL DATA FOR NBS SRM 120B (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ag (ug/g)</u>					<u>Ca (%)</u>				
5			ICPES	81CHU 01	17.8			SIMS	78MOR 01
					32.7		35	TCGS	78GLA 04
					33			EXRF	80DAL 01
<u>Al (ug/g)</u>					33.78	2.07		ICPES	82JEN 01
5100	100		AA	82JEN 01	33.98	0.72		AA	82JEN 01
5400	500		ICPES	82JEN 01	35.06	1.16		ICPES	81CHU 01
5870	20		ICPES	81CHU 01	35.24		11	ICPES	83HOF 01
5980		11	ICPES	83HOF 01	35.24		11	ICPES	84HOF 01
6000		35	TCGS	78GLA 04	35.41	0.06	11	ICPES	84HOF 01
6000		11	ICPES	84HOF 01	35.41	0.06	11	ICPES	83HOF 01
6000	480	11	ICPES	84HOF 01	<u>Cd (ug/g)</u>				
6000	500	11	ICPES	83HOF 01	20.1			AA	84TER 01
7780			EXRF	80DAL 01	22	10		ICPES	81CHU 01
8500			SIMS	78MOR 01	25.3			AA	76KRI 03
<u>As (ug/g)</u>					<u>Ce (ug/g)</u>				
<	5	L	ICPES	81CHU 01	100			ITNA	85POT 02
5.52			HAA	84TER 04	118			ICPES	84MCA 01
<u>Au (ug/g)</u>					128	3		ICPES	85JAR 02
<	3	L	ICPES	81CHU 01	182	3.6		ICPES	81CHU 01
<u>Ba (ug/g)</u>					<u>Co (ug/g)</u>				
61	1.2		ICPES	81CHU 01	2.7			ITNA	85POT 02
					3	1		ICPES	81CHU 01
<u>Be (ug/g)</u>					<u>Cr (ug/g)</u>				
2.82			AA	82TER 02	56			ITNA	85POT 02
2.82		D	AA	83TER 01	63.1	1.9		ICPES	81CHU 01
2.9	0.06		ICPES	81CHU 01	<u>Cu (ug/g)</u>				
<u>Bi (ng/g)</u>					8.6	1		ICPES	81CHU 01
<	25000	L	ICPES	81CHU 01	11.3			AA	76KRI 03
197			HAA	84TER 02	<u>Dy (ug/g)</u>				
197		D	FAA	84TER 03	17			ICPES	84MCA 01
<u>C (%)</u>					17.3	0.2		ICPES	85JAR 02
0.983			CB	77TIL 01	<u>Er (ug/g)</u>				
1.8			SIMS	78MOR 01	11.4	0.1		ICPES	85JAR 02
					12			ICPES	84MCA 01

TABLE 120B-2: INDIVIDUAL DATA FOR NBS SRM 120B (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Eu (ug/g)</u>					<u>K (ug/g)</u>				
3.5			ITNA	85POT 02	110		35	TCGS	78GLA 04
3.5			ICPES	84MCA 01	600	200		ICPES	82JEN 01
3.89	0.07		ICPES	85JAR 02	660			EXRF	80DAL 01
4.8	1		ICPES	81CHU 01	760			SIMS	78MOR 01
					800	100		AA	82JEN 01
					1170	25		ICPES	81CHU 01
<u>F (%)</u>					<u>La (ug/g)</u>				
3.78	0.07		NAA	80NOR 01					
3.82		35	IENA	79GLA 03	79			ITNA	85POT 02
3.89	0.21		IC	82JEN 01	89	4		ICPES	81CHU 01
3.93	0.09		CPAA	84HAN 01	90			ICPES	84MCA 01
4.04	0.47		ISE	82JEN 01	92.8	1.6		ICPES	85JAR 02
<u>Fe (ug/g)</u>					<u>Li (ug/g)</u>				
3200			SIMS	78MOR 01					
6570			ITNA	85POT 02	<	2	L	ICPES	81CHU 01
6600	200		AA	82JEN 01	<u>Lu (ug/g)</u>				
6990		11	ICPES	83HOF 01	1.6			ICPES	84MCA 01
7000		11	ICPES	84HOF 01	1.71	0.05		ICPES	85JAR 02
7200	800		ICPES	82JEN 01	1.8			ITNA	85POT 02
7400		35	TCGS	78GLA 04	<u>Mg (ug/g)</u>				
7500	300	11	ICPES	83HOF 01	51		35	TCGS	78GLA 04
7500	350	11	ICPES	84HOF 01	1600	100		ICPES	82JEN 01
7700		35	IENA	79GLA 03	1600	100		AA	82JEN 01
7827			AA	76KRI 03	1700		11	ICPES	84HOF 01
7900	200		ICPES	81CHU 01	1700		11	ICPES	83HOF 01
7970			EXRF	80DAL 01	1700	60	11	ICPES	84HOF 01
<u>Gd (ug/g)</u>					1700	100	11	ICPES	83HOF 01
17.8	0.3		ICPES	85JAR 02	1870	60		ICPES	81CHU 01
18			ICPES	84MCA 01	2800			SIMS	78MOR 01
21	0.6		ICPES	81CHU 01	<u>Mn (ug/g)</u>				
<u>Hf (ug/g)</u>					130			SIMS	78MOR 01
2			ITNA	85POT 02	150			EXRF	80DAL 01
<u>Ho (ug/g)</u>					230	15		ICPES	82JEN 01
3.8			ICPES	84MCA 01	240	20		AA	82JEN 01
4.03	0.04		ICPES	85JAR 02	246			AA	76KRI 03
					260	7.8		ICPES	81CHU 01
					<u>Mo (ug/g)</u>				
					<	5	L	ICPES	81CHU 01

TABLE 120B-2: INDIVIDUAL DATA FOR NBS SRM 120B (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Na (ug/g)</u>					<u>S (ug/g)</u>				
2300	100		AA	82JEN 01	2200			EXRF	80DAL 01
2630	70		ICPES	81CHU 01					
2800		35	TCGS	78GLA 04	<u>Sb (ug/g)</u>				
2900			SIMS	78MOR 01	1.62			HAA	84TER 04
<u>Nd (ug/g)</u>					10			ICPES	81CHU 01
68			ITNA	85POT 02	<u>Sc (ug/g)</u>				
77			ICPES	84MCA 01	6.4			ITNA	85POT 02
79.5	0.9		ICPES	85JAR 02	<u>Se (ug/g)</u>				
127	25		ICPES	81CHU 01					
<u>Ni (ug/g)</u>					<	30	L	ICPES	81CHU 01
12		35	IENA	79GLA 03	<u>Si (%)</u>				
15.4	1		ICPES	81CHU 01	2.01			EXRF	80DAL 01
22.9			AA	76KRI 03	2.12		35	IENA	79GLA 03
<u>O (%)</u>					2.12	0.19		ICPES	82JEN 01
36	0.5		14NAA	80NOR 01	2.19		35	TCGS	78GLA 04
<u>P (%)</u>					2.21	0.01		AA	82KIS 01
12.97	0.79		IC	82JEN 01	2.23	0.03	11	ICPES	84HOF 01
13.5			SIMS	78MOR 01	2.23	0.03	11	ICPES	83HOF 01
14.7		35	TCGS	78GLA 04	2.32		11	ICPES	84HOF 01
14.96	0.14	11	ICPES	84HOF 01	2.32		11	ICPES	83HOF 01
15.04	0.14	11	ICPES	83HOF 01	2.41	0.24		AA	82JEN 01
15.12		11	ICPES	84HOF 01	<u>Sm (ug/g)</u>				
15.19	1.23		ICPES	82JEN 01	15.8	0.2		ICPES	85JAR 02
15.2		11	ICPES	83HOF 01	16			ICPES	84MCA 01
15.21	0.38		ICPES	81CHU 01	38	1.9		ICPES	81CHU 01
15.9			EXRF	80DAL 01	<u>Sn (ug/g)</u>				
<u>Pb (ug/g)</u>					<	3	L	ICPES	81CHU 01
13.1			AA	84TER 01	0.41	0.05		FAA	85TER 01
25	5		ICPES	81CHU 01	<u>Sr (ug/g)</u>				
32.7			AA	76KRI 03	705	14		ICPES	81CHU 01
<u>Pr (ug/g)</u>					<u>Ta (ng/g)</u>				
17			ICPES	84MCA 01	200			ITNA	85POT 02
17.9	0.2		ICPES	85JAR 02	<u>Tb (ug/g)</u>				
<u>Ra-226 (pCi/g)</u>					2			ITNA	85POT 02
43.3	0.6		GAMMA	83KIM 01					

TABLE 120B-2: INDIVIDUAL DATA FOR NBS SRM 120B (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Th (ug/g)</u>					<u>U-238 (pCi/g)</u>				
<	25	L	ICPES	81CHU 01	42.8	0.8		GAMMA	83KIM 01
7.2			ITNA	85POT 02					
7.9	0.8		AS	82ROE 01	<u>V (ug/g)</u>				
9.05	0.4		AS	82THO 02	103	3.1		ICPES	81CHU 01
<u>Ti (ug/g)</u>					120	10		ICPES	82JEN 01
590			SIMS	78MOR 01	280	40		AA	82JEN 01
740	20		ICPES	81CHU 01	<u>Y (ug/g)</u>				
780		35	IENA	79GLA 03	172	5		ICPES	85JAR 02
950		35	TCGS	78GLA 04	<u>Yb (ug/g)</u>				
950	10	11	ICPES	83HOF 01	10			ICPES	84MCA 01
950	10		ICPES	84HOF 01	10.2			ITNA	85POT 02
1200			EXRF	80DAL 01	10.8	0.2		ICPES	85JAR 02
<u>Tm (ug/g)</u>					12.7	0.4		ICPES	81CHU 01
1.1			ITNA	85POT 02	<u>Zn (ug/g)</u>				
<u>U (ug/g)</u>					107			AA	76KRI 03
125.7	0.6		DNA	86GAU 01	127	3.9		ICPES	81CHU 01
130	5		AS	82ROE 01	<u>Zr (ug/g)</u>				
130.25	1.5		ICPES	83NOR 01	12	1.2		ICPES	81CHU 01
132	2		AS	82THO 02					
140			ITNA	85POT 02					

TABLE 181-1: COMPILED DATA FOR NBS SRM 181 LITHIUM ORE (SPODUMENE)
(revised 3/1/86)

ELEMENT	UNITS	NBS	CONSENSUS	METHOD
Bi	ng/g	---	892 (1)	AA
K	ug/g	2500	---	---
Li	%	2.97 ± 0.02	---	---
Na	ug/g	5900	---	---

TABLE 182-1: COMPILED DATA FOR NBS SRM 182 LITHIUM ORE (PETALITE)
(revised 3/1/86)

ELEMENT	UNITS	NBS
K	ug/g	830
Li	%	2.02 ± 0.02
Na	ug/g	3000
Rb	ug/g	275

TABLE 183-1: COMPILED DATA FOR NBS SRM 183 LITHIUM ORE (LEPIDOLITE)
(revised 3/1/86)

ELEMENT	UNITS	NBS
Cs	ug/g	2800
K	%	6.6
Li	%	1.92 ± 0.02
Na	ug/g	1500
Rb	%	3.2

TABLE 181-2: INDIVIDUAL DATA FOR NBS SRM 181
(revised 3/1/86)

Conc	Uncer	Com	Method	Reference
<u>Bi (ng/g)</u>				
892			FAA	84TER 03

TABLE 278-1: COMPILED DATA FOR NBS SRM 278 OBSIDIAN ROCK (revised 3/1/86)

ELE	UNITS	NBS Mean \pm SD	CONSENSUS Mean \pm SD (n)	MEDIAN	RANGE	NAA Mean \pm SD (n)	ICPES Mean (n)	XRF Mean (n)	OTHER METHODS Mean \pm SD (n) Method
Al	%	7.49 \pm 0.08	7.61 \pm 0.13 (7)	7.56	7.43 - 7.8	7.52 (2)	7.78 (1)	7.56 (1)	7.63 \pm 0.14 (3) TCGS
As	ug/g	---	4.9 \pm 0.2 (3)	5.06	4.68 - 5.1	4.9 \pm 0.2 (3)	---	---	---
Au	ng/g	---	2.12 (2)	---	1.6 - 2.64	2.12 (2)	---	---	---
B	ug/g	25	25 \pm 2 (6)	24.9	21 - 27.9	---	---	---	25.6 \pm 1.4 (5) TCGS
B	ug/g	---	---	---	---	---	---	---	21 (1) OES
Ba	ug/g	1140	1000 \pm 90 (5)	1050	885 - 1080	1019 \pm 90 (4)	928 (1)	---	---
Be	ug/g	---	1.9 (2)	---	1.4 - 2.4	---	2.4 (1)	---	1.4 (1) OES
Br	ug/g	---	2.8 \pm 0.2 (3)	2.65	2.61 - 2.99	2.75 \pm 0.21 (3)	---	---	---
C-I	ug/g	27	---	---	---	---	---	---	---
C-T	ug/g	500	---	---	---	---	---	---	---
Ca	ug/g	7030 \pm 20	7180 \pm 170 (7)	7100	7000 - 7500	7250 (2)	7200 (1)	7080 (1)	7170 \pm 110 (3) TCGS
Cd	ng/g	---	180 (2)	---	180 - 180	---	---	---	180 (2) TCGS
Ce	ug/g	62.2	60 \pm 5 (8)	56.5	54.4 - 68	60 \pm 5 (7)	61 (1)	---	---
Cl	ug/g	---	622 \pm 14 (4)	610	610 - 640	---	---	---	620 \pm 17 (3) TCGS
Cl	ug/g	---	---	---	---	---	---	---	627 (1) ISE
Co	ug/g	1.5	2.1 \pm 0.3 (6)	2	1.85 - 2.7	2.1 \pm 0.3 (5)	2 (1)	---	---
Cr	ug/g	6.1	6.4 \pm 0.9 (5)	6.42	5 - 7.5	6.8 \pm 0.5 (4)	5 (1)	---	---
Cs	ug/g	5.5	5.1 \pm 0.2 (7)	5.12	4.9 - 5.46	5.1 \pm 0.2 (7)	---	---	---
Cu	ug/g	5.9 \pm 0.2	< 5	---	---	---	---	< 5	---
Dy	ug/g	---	6.5 \pm 0.3 (3)	6.51	6.2 - 6.8	6.36 (2)	6.8 (1)	---	---
Er	ug/g	---	3.9 (2)	---	3.66 - 4.1	3.66 (1)	4.1 (1)	---	---
Eu	ng/g	840	800 \pm 25 (8)	790	764 - 830	800 \pm 24 (7)	770 (1)	---	---
F	ug/g	500	---	---	---	---	---	---	---
Fe	%	1.43 \pm 0.02	1.46 \pm 0.08 (9)	1.47	1.32 - 1.55	1.54 \pm 0.02 (3)	1.47 (1)	1.45 (1)	1.41 \pm 0.10 (4) TCGS
Fe203	%	---	0.49 (1)	---	---	---	---	---	0.49 (1) CALC
FeO	%	1.36 \pm 0.02	1.38 (2)	---	1.35 - 1.42	---	---	---	1.42 (1) COLOR
FeO	%	---	---	---	---	---	---	---	1.35 (1) TITR
Ga	ug/g	---	11 (2)	---	10 - 12.47	11 (2)	22 (1)	---	---
Gd	ug/g	5.3	5.6 \pm 0.4 (9)	5.5	4.96 - 6.1	5.3 \pm 0.7 (3)	6.1 (1)	---	5.49 \pm 0.38 (6) TCGS
H	ug/g	---	660 \pm 200 (3)	550	530 - 890	---	---	---	660 \pm 200 (3) TCGS
H2O+	%	---	0.30 (1)	---	---	---	---	---	0.3 (1) COUL
H2O-	%	---	0.05 (1)	---	---	---	---	---	0.05 (1) COUL
Hf	ug/g	8.4	8.76 \pm 0.14 (3)	8.82	8.6 - 8.86	8.76 \pm 0.14 (3)	---	---	---
Ho	ug/g	---	1.31 \pm 0.16 (3)	1.23	1.2 - 1.5	1.22 (2)	1.5 (1)	---	---

TABLE 278-1 COMPILED DATA FOR NBS SRM 278 OBSIDIAN ROCK (cont.)

ELE	UNITS	NBS Mean \pm SD	CONSENSUS Mean \pm SD (n)	MEDIAN	RANGE	NAA Mean \pm SD (n)	ICPES Mean (n)	XRF Mean (n)	OTHER METHODS	
									Mean \pm SD	(n) Method
In	ng/g	---	43.6 (1)	---	---	43.6 (1)	---	---	---	---
K	%	3.45 \pm 0.02	3.38 \pm 0.10 (8)	3.34	3.28 - 3.58	3.35 (2)	3.34 (1)	3.4 (1)	3.41 \pm 0.13 (4)	TCGS
La	ug/g	---	33 \pm 4 (8)	33	27.95 - 37.8	33 \pm 4 (7)	31 (1)	24 (1)	---	---
Li	ug/g	---	47 (1)	---	---	---	47 (1)	---	---	---
Lu	ng/g	730	820 \pm 95 (7)	820	710 - 947	840 \pm 90 (6)	710 (1)	---	---	---
Mg	ug/g	1400	1485 (2)	---	1430 - 1540	---	1430 (1)	1540 (1)	---	---
Mn	ug/g	400 \pm 15	390 \pm 21 (9)	382	367 - 430	386 \pm 21 (4)	373 (1)	395 (1)	397 \pm 28 (3)	TCGS
Mo	ug/g	---	3.2 \pm 1.0 (3)	3.73	2 - 3.73	3.73 (2)	2 (1)	---	---	---
Na	%	3.59 \pm 0.04	3.50 \pm 0.04 (7)	3.49	3.44 - 3.56	3.45 \pm 0.11 (4)	3.44 (1)	3.56 (1)	3.51 (2)	TCGS
Nb	ug/g	---	16 (2)	---	12.7 - 18.4	---	12.7 (1)	18.4 (1)	---	---
Nd	ug/g	---	29 \pm 2 (7)	29.5	26 - 33.5	29 \pm 3 (4)	28.6 (1)	---	30 (2)	TCGS
Ni	ug/g	3.6 \pm 0.3	12 (2)	---	4 - 19	---	4 (1)	19 (1)	---	---
P	ug/g	160 \pm 13	140 (2)	---	110 - 170	---	170 (1)	110 (1)	---	---
Pb	ug/g	16.4 \pm 0.2	17 (2)	---	16.22 - 18	---	18 (1)	---	16.22 (1)	IDMS
Pr	ug/g	---	8 (2)	---	7.48 - 8.6	7.48 (1)	8.6 (1)	---	---	---
Rb	ug/g	127.5 \pm 0.3	133 \pm 6 (6)	130	128.4 - 143.17	135 \pm 6 (4)	---	128.7 (2)	---	---
Sb	ug/g	1.5	1.72 \pm 0.13 (5)	1.7	1.59 - 1.9	1.72 \pm 0.13 (5)	---	---	---	---
Sc	ug/g	5.1	5.1 \pm 0.5 (8)	5.1	4.16 - 6	5.16 \pm 0.14 (6)	6 (1)	---	---	---
Si	%	34.11 \pm 0.06	33.4 \pm 0.6 (4)	33.1	33.1 - 34.25	---	---	34.25 (1)	33.13 \pm 0.06 (3)	TCGS
Sm	ug/g	5.7	5.8 \pm 0.2 (11)	5.8	5.45 - 6.2	5.81 \pm 0.13 (5)	6.8 (1)	---	5.8 \pm 0.29 (6)	TCGS
Sr	ug/g	63.5 \pm 0.1	61 \pm 3 (4)	60	58 - 66	58 (1)	60 (1)	63.9 (2)	---	---
Ta	ug/g	1.2	1.28 \pm 0.06 (4)	1.23	1.23 - 1.34	1.28 \pm 0.06 (4)	---	---	---	---
Tb	ug/g	1	1.10 \pm 0.16 (6)	1.12	0.8 - 1.23	1.10 \pm 0.16 (6)	---	---	---	---
Th	ug/g	12.4 \pm 0.3	12.8 \pm 0.4 (7)	12.8	12.27 - 13.2	12.7 \pm 0.4 (6)	13 (1)	---	---	---
Ti	ug/g	1470 \pm 40	1420 \pm 70 (6)	1420	1330 - 1500	---	1480 (1)	1420 (1)	1400 \pm 90 (4)	TCGS
Tl	ng/g	540 \pm 40	---	---	---	---	---	---	---	---
Tm	ng/g	---	340 \pm 50 (3)	330	301 - 400	340 \pm 50 (3)	500 (1)	---	---	---
U	ug/g	4.58 \pm 0.04	4.53 \pm 0.23 (10)	4.51	4.20 - 4.96	4.58 \pm 0.23 (8)	---	---	4.51 (1)	IDMS
U	ug/g	---	---	---	---	---	---	---	4.21 (1)	FLUOR
V	ug/g	---	15 \pm 8 (3)	12	8 - 24	12 (1)	8 (1)	24 (1)	---	---
Y	ug/g	---	41 \pm 3 (3)	41	38.3 - 44.5	---	38.3 (1)	42.75 (2)	---	---
Yb	ug/g	4.5	4.5 \pm 0.6 (8)	4.68	3.58 - 5.09	4.5 \pm 0.6 (7)	4.68 (1)	---	---	---
Zn	ug/g	55	54 \pm 4 (4)	54	47.8 - 57.4	55.7 (2)	47.8 (1)	57 (1)	---	---
Zr	ug/g	---	295 \pm 11 (5)	290	285 - 311	298 (2)	290 (1)	295.4 (2)	---	---

TABLE 278-2: INDIVIDUAL DATA FOR NBS SRM 278 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Al (%)</u>					<u>Ca (ug/g)</u>				
7.43	0.57		ITNA	82GRA 01	6000	1000		TCGS	82GRA 01
7.55	0.08		TCGS	83AND 01	7000	570		ITNA	85GLA 01
7.55	0.08		TCGS	85AND 01	7080	50		WXRf	85GLA 01
7.56	0.06		WXRf	85GLA 01	7100	300		TCGS	85AND 01
7.62	0.11		ITNA	85GLA 01	7100	300		TCGS	83AND 01
7.78	0.08		ICPES	83CRO 01	7200	100		ICPES	83CRO 01
7.8	0.2		TCGS	82GRA 01	7300	300		TCGS	82VOG 01
					7500	1200		ITNA	82GRA 01
<u>As (ug/g)</u>					<u>Cd (ng/g)</u>				
4.68	0.13		ITNA	81AHM 01	180	60		TCGS	85AND 01
5.06	1.29		ITNA	82GRA 01	180	60		TCGS	83AND 01
5.1	0.88		ITNA	82VOG 01					
<u>Au (ng/g)</u>					<u>Ce (ug/g)</u>				
1.6	0.8		ITNA	82GRA 01	54.4	2.2		ITNA	84ODD 01
2.64	0.52		ITNA	82VOG 01	55.8	0.3		RTNA	84ODD 01
					56.5	1.9		ITNA	81AHM 01
					56.5	2.9		ITNA	80AHM 01
					59.4	6.8		ITNA	82GRA 01
21			OES	83MIL 01	61	1		ICPES	83CRO 01
24.1	0.4		TCGS	83AND 01	66.5	9.3		ITNA	82VOG 01
24.9	0.5		TCGS	82VOG 01	68	1		ITNA	85GLA 01
25.2	0.4		TCGS	82GRA 01	90	30		WXRf	85GLA 01
26	3		TCGS	84GLA 01					
27.9	0.4		TCGS	85AND 01					
<u>Ba (ug/g)</u>					<u>Cl (ug/g)</u>				
600	160		WXRf	85GLA 01	610	7		TCGS	85AND 01
885	54		ITNA	81AHM 01	610	7		TCGS	83AND 01
928	9		ICPES	83CRO 01	627	14		ISE	86ELS 01
1050	40		ITNA	85GLA 01	640	90		TCGS	82GRA 01
1060	40		ITNA	82VOG 01					
1080	58		ITNA	82GRA 01					
<u>Be (ug/g)</u>					<u>Co (ug/g)</u>				
1.4			OES	83MIL 01	1.85	0.18		ITNA	82GRA 01
2.4	0.1		ICPES	83CRO 01	1.89	0.31		ITNA	82VOG 01
					2	1		ICPES	83CRO 01
					2.04	0.22		ITNA	81AHM 01
					2.08	0.1		ITNA	85GLA 01
					2.6	2.7		WXRf	85GLA 01
					2.7	0.2		ITNA	84GLA 11
<u>Br (ug/g)</u>					<u>Cr (ug/g)</u>				
2.61	0.62		ITNA	82GRA 01	2	7		WXRf	85GLA 01
2.65	0.2		ITNA	81AHM 01	5	0.5		ICPES	83CRO 01
2.99	1.01		ITNA	82VOG 01	6.34	0.93		ITNA	82GRA 01
					6.42	0.28		ITNA	82VOG 01
					6.79	0.44		ITNA	81AHM 01
					7.5	1.2		ITNA	86GAU 01

TABLE 278-2: INDIVIDUAL DATA FOR NBS SRM 278 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Cs (ug/g)</u>					<u>FEO (%)</u>				
4.9			ITNA	86GAU 01	1.35			TITR	84GOL 01
4.91	0.14		ITNA	84GLA 11	1.42	0.1		COLOR	85GLA 01
4.92	0.34		ITNA	82GRA 01					
5.12	0.44		ITNA	81AHM 01	<u>Ga (ug/g)</u>				
5.3	0.25		ITNA	82VOG 01	10	3		ITNA	82GRA 01
5.3	0.7		ITNA	84GLA 02	12.47	2.53		ITNA	82VOG 01
5.46	0.07		ITNA	85GLA 01	22	4		ICPES	83CRO 01
<u>Cu (ug/g)</u>					<u>Gd (ug/g)</u>				
<	5		ICPES	83CRO 01	4.5			ITNA	82GRA 01
<u>Dy (ug/g)</u>					4.96	0.08		TCGS	83AND 01
6.2	0.1		ITNA	84ODD 01	5.28	0.06		TCGS	82VOG 01
6.51	0.2		RTNA	84ODD 01	5.34	0.08		TCGS	82GRA 01
6.8	0.4		ICPES	83CRO 01	5.5	0.5	4	TCGS	85GLA 05
<u>Er (ug/g)</u>					5.65	0.07		ITNA	84ODD 01
3.66	0.07		RTNA	84ODD 01	5.7	0.03		RTNA	84ODD 01
4.1	0.3		ICPES	83CRO 01	5.9	0.5	4	TCGS	85GLA 05
<u>Eu (ng/g)</u>					5.95	0.08		TCGS	85AND 01
764	56		ITNA	82GRA 01	6.1	0.3		ICPES	83CRO 01
770	30		ICPES	83CRO 01	37.74	1.5		ITNA	80AHM 01
780	20		RTNA	84ODD 01	37.74	1.5		ITNA	81AHM 01
790	40		ITNA	85GLA 01	<u>H (ug/g)</u>				
796	9		ITNA	82VOG 01	530	45		TCGS	83AND 01
820	30		ITNA	80AHM 01	550	50		TCGS	85AND 01
820	30		ITNA	81AHM 01	890	120		TCGS	82VOG 01
830	20		ITNA	84ODD 01	<u>H2O+ (%)</u>				
<u>Fe (%)</u>					0.3	0.02		COUL	85GLA 01
1.14	0.23		ITNA	81AHM 01	<u>H2O- (%)</u>				
1.32	0.17		TCGS	82GRA 01	0.05	0.01		COUL	85GLA 01
1.39	0.05		TCGS	83AND 01	<u>Hf (ug/g)</u>				
1.39	0.05		TCGS	85AND 01	6.41	0.24		ITNA	81AHM 01
1.45	0.02		WXRf	85GLA 01	8.6	0.2		ITNA	85GLA 01
1.47	0.01		ICPES	83CRO 01	8.82	0.73		ITNA	82GRA 01
1.52	0.05		ITNA	82GRA 01	8.86	0.73		ITNA	82VOG 01
1.54	0.01		ITNA	82VOG 01	<u>Ho (ug/g)</u>				
1.55	0.04		ITNA	85GLA 01	1.2	0.04		RTNA	84ODD 01
1.55	0.06		TCGS	82VOG 01	1.23	0.06		ITNA	84ODD 01
<u>FE2O3 (%)</u>					1.5	0.1		ICPES	83CRO 01
0.49	0.11		CALC	85GLA 01					

TABLE 278-2: INDIVIDUAL DATA FOR NBS SRM 278 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>In (ng/g)</u>					<u>Mn (ug/g)</u>				
43.6	2.7		ITNA	81AHM 01	367	15		ITNA	82VOG 01
					370	15		ITNA	85GLA 01
<u>K (%)</u>					373	3		ICPES	83CRO 01
3.28	0.11		ITNA	85GLA 01	380	50		TCGS	83AND 01
3.31	0.01		TCGS	83AND 01	382	52		TCGS	85AND 01
3.31	0.01		TCGS	85AND 01	395	40		WXRF	85GLA 01
3.34	0.03		ICPES	83CRO 01	400	50		ITNA	82GRA 01
3.4	0.01		WXRF	85GLA 01	409	15		ITNA	81AHM 01
3.42	0.34		ITNA	82GRA 01	430	70		TCGS	82GRA 01
3.44	0.08		TCGS	82GRA 01	<u>Mo (ug/g)</u>				
3.58	0.7		TCGS	82VOG 01	2	1		ICPES	83CRO 01
4.23	0.13		ITNA	81AHM 01	3.73	0.52		ITNA	82VOG 01
<u>La (ug/g)</u>					3.73	0.52		ITNA	82GRA 01
24	6		WXRF	85GLA 01	<u>Na (%)</u>				
27.59	0.38		ITNA	81AHM 01	2.6	0.2		TCGS	82GRA 01
27.6	0.4		ITNA	80AHM 01	3.3	0.4		ITNA	82VOG 01
31	0.7		ICPES	83CRO 01	3.44	0.02		ICPES	83CRO 01
33	3		ITNA	85GLA 01	3.46	0.26		ITNA	82GRA 01
35.4	2.5		ITNA	82GRA 01	3.49	0.01		ITNA	85GAU 04
35.8	1.5		ITNA	82VOG 01	3.51	0.05		TCGS	85AND 01
37.6	0.8		ITNA	84ODD 01	3.51	0.05		TCGS	83AND 01
37.8	0.8		RTNA	84ODD 01	3.56	0.02		WXRF	85GLA 01
<u>Li (ug/g)</u>					3.56	0.03		ITNA	85GLA 01
47	1		ICPES	83CRO 01	3.9	0.23		ITNA	81AHM 01
<u>Lu (ng/g)</u>					<u>Nb (ug/g)</u>				
710	10		ICPES	83CRO 01	12.7	0.9		ICPES	83CRO 01
740	50		ITNA	80AHM 01	18.4	1.5		WXRF	84KYL 01
745	310		ITNA	81AHM 01	<u>Nd (ug/g)</u>				
820	39		ITNA	82VOG 01	26	4		ITNA	85GLA 01
836	50		ITNA	82GRA 01	28.2	1		ITNA	82GRA 01
934	2		RTNA	84ODD 01	28.6	0.9		ICPES	83CRO 01
947	2		ITNA	84ODD 01	29.5	0.3		ITNA	84ODD 01
<u>Mg (ug/g)</u>					30	5		TCGS	83AND 01
< 2400			ITNA	85GLA 01	30	5		TCGS	85AND 01
1430	20		ICPES	83CRO 01	33.5	0.02		RTNA	84ODD 01
1540	30		WXRF	85GLA 01	<u>Ni (ug/g)</u>				
					4	2		ICPES	83CRO 01
					19	50		WXRF	85GLA 01

TABLE 278-2: INDIVIDUAL DATA FOR NBS SRM 278 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>P (ug/g)</u>					<u>Sm (ug/g)</u>				
110	20		WXRF	85GLA 01	5.45	0.03		TCGS	83AND 01
170	10		ICPES	83CRO 01	5.61	0.05		TCGS	82VOG 01
					5.66	0.1		TCGS	82GRA 01
<u>Pb (ug/g)</u>					5.69	0.62		ITNA	82GRA 01
16.22	0.037		IDMS	86FIS 01	5.7	0.7		ITNA	82VOG 01
18	3		ICPES	83CRO 01	5.8	0.03		RTNA	84ODD 01
<u>Pr (ug/g)</u>					5.8	0.6	4	TCGS	85GLA 05
7.48	0.08		RTNA	84ODD 01	5.85	0.09		ITNA	84ODD 01
8.6	0.8		ICPES	83CRO 01	6	0.7		ITNA	85GLA 01
<u>Rb (ug/g)</u>					6.08	0.03		TCGS	85AND 01
128.4	1		WXRF	84KYL 01	6.2	0.6	4	TCGS	85GLA 05
129	7		WXRF	85GLA 01	6.8	0.6		ICPES	83CRO 01
130	5		ITNA	85GLA 01	<u>Sr (ug/g)</u>				
130	12		ITNA	82GRA 01	58			IENA	85GAU 04
138	10		ITNA	82VOG 01	60	3		ICPES	83CRO 01
143.17	2.63		ITNA	81AHM 01	61.8	1		WXRF	84KYL 01
<u>Sb (ug/g)</u>					66	6		WXRF	85GLA 01
1.59	0.05		ITNA	82VOG 01	<u>Ta (ug/g)</u>				
1.61	0.13		ITNA	82GRA 01	1.23	0.16		ITNA	82VOG 01
1.7	0.4		ITNA	81AHM 01	1.23	0.19		ITNA	82GRA 01
1.8	0.1		ITNA	85GLA 01	1.32	0.18		ITNA	81AHM 01
1.9			ITNA	84GLA 02	1.34	0.09		ITNA	85GLA 01
<u>Sc (ug/g)</u>					<u>Tb (ug/g)</u>				
4.16	0.21		ITNA	81AHM 01	0.8	0.02		ITNA	85GLA 01
5	0.03		ITNA	86GAU 01	1.11	0.1		ITNA	84ODD 01
5	0.1		ITNA	84GLA 02	1.12	0.22		ITNA	82VOG 01
5.1	0.07		ITNA	84GLA 11	1.14	0.1		ITNA	82GRA 01
5.24	0.14		ITNA	82GRA 01	1.23	0.03		ITNA	81AHM 01
5.3	0.1		ITNA	85GLA 01	1.23	0.08		ITNA	80AHM 01
5.31	0.05		ITNA	82VOG 01	1.81	0.03		RTNA	84ODD 01
6	0.5		ICPES	83CRO 01	<u>Th (ug/g)</u>				
<u>Si (%)</u>					12.27	0.77		ITNA	81AHM 01
33.1	0.3		TCGS	85AND 01	12.27	0.77		ITNA	80CHA 02
33.1	0.3		TCGS	83AND 01	12.7	0.4		ITNA	86GAU 01
33.2	0.7		TCGS	82VOG 01	12.8	0.3		ITNA	82GRA 01
34.25	0.14		WXRF	85GLA 01	13	3		ICPES	83CRO 01
36.6	1.3		TCGS	82GRA 01	13.1	0.2		ITNA	82VOG 01
					13.2	0.4		ITNA	85GLA 01

TABLE 278-2: INDIVIDUAL DATA FOR NBS SRM 278 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ti (ug/g)</u>					<u>Zn (ug/g)</u>				
1330	60		TCGS	85AND 01	47.8	0.4		ICPES	83CRO 01
1330	60		TCGS	83AND 01	54	2.5		ITNA	82GRA 01
1420	30		WXRF	85GLA 01	57	7		WXRF	85GLA 01
1450	90		TCGS	82GRA 01	57.4	3.6		ITNA	82VOG 01
1480	10		ICPES	83CRO 01					
1500	40		TCGS	82VOG 01	<u>Zr (ug/g)</u>				
<u>Tm (ng/g)</u>					285	16		ITNA	82GRA 01
301	20		ITNA	81AHM 01	288.8	2		WXRF	84KYL 01
330	30		RTNA	84ODD 01	290	2		ICPES	83CRO 01
400	20		ITNA	84ODD 01	302	9		WXRF	85GLA 01
500	100		ICPES	83CRO 01	311	50		ITNA	82VOG 01
<u>U (ug/g)</u>									
4.204	0.284		ITNA	81AHM 01					
4.21	0.12		FLUOR	86KAN 01					
4.51	0.005		IDMS	86FIS 01					
4.51	0.05		DNA	85GLA 04					
4.51	0.08		DNA	85GLA 01					
4.51	0.08		DNA	85GAU 04					
4.53	0.12		DNA	86GAU 01					
4.58			DNA	84GLA 02					
4.82	0.35		ITNA	82GRA 01					
4.96	0.33		ITNA	82VOG 01					
<u>V (ug/g)</u>									
8	1		ICPES	83CRO 01					
12	4		ITNA	85GLA 01					
24	4		WXRF	85GLA 01					
<u>Y (ug/g)</u>									
38.3	4		ICPES	83CRO 01					
41	2		WXRF	85GLA 01					
44.5	1		WXRF	84KYL 01					
<u>Yb (ug/g)</u>									
3.58	0.25		ITNA	80AHM 01					
3.58	0.25		ITNA	81AHM 01					
4.54	0.86		ITNA	82GRA 01					
4.68	0.05		ICPES	83CRO 01					
4.79	0.04		ITNA	84ODD 01					
4.8	0.2		ITNA	85GLA 01					
5.04	0.08		RTNA	84ODD 01					
5.09	0.95		ITNA	82VOG 01					

TABLE 330-1: COMPILED DATA ON NBS SRM 330 COPPER ORE, MILL HEADS (revised 3/1/86)

ELEMENT	UNITS	NBS
Ag	ug/g	1.51
Au	ng/g	93
Cu	ug/g	8400 \pm 100
Mo	ug/g	180 \pm 10
Re	ng/g	300 \pm 60

TABLE 331-1: COMPILED DATA ON NBS SRM 331 COPPER ORE, MILL TAILS (revised 3/1/86)

ELEMENT	UNITS	NBS
Ag	ng/g	243
Au	ng/g	34
Cu	ug/g	910 \pm 10
Mo	ug/g	22 \pm 2
Re	ng/g	40 \pm 20

TABLE 332-1: COMPILED DATA ON NBS SRM 332 COPPER CONCENTRATE (revised 3/1/86)

ELEMENT	UNITS	NBS	CONSENSUS	METHOD
Ag	ug/g	38.7	---	---
Au	ug/g	2.14	---	---
Cu	%	28.4 \pm 0.1	---	---
Mo	ug/g	6400 \pm 100	---	---
Re	ug/g	10.2 \pm 0.2	10.2 (1)	PROBE

TABLE 332-2: INDIVIDUAL DATA FOR NBS SRM 332 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference
<u>Re (ug/g)</u>				
10.2	1.8		PROBE	85HAS 01

TABLE 333-1: COMPILED DATA ON NBS SRM 333 MOLYBDENUM CONCENTRATE (revised 3/1/86)

ELEMENT	UNITS	NBS
Ag	ug/g	25
Au	ug/g	8.9
Cu	%	1.038 \pm 0.01
Mo	%	55.3 \pm 0.1
Re	ug/g	870 \pm 10

TABLE 610-1: COMPILED DATA FOR NBS SRM 610 TRACE ELEMENTS IN GLASS (revised 3/1/86)

ELEMENT	UNITS	NBS	CONSENSUS		MEDIAN	RANGE	METHOD MEANS		
		Mean \pm SD	Mean \pm SD	(n)			Mean \pm SD	(n)	Method
Ag	ug/g	254 \pm 10	180	(1)	---	---	180	(1)	NAA
As	ug/g	---	305	(1)	---	---	305	(1)	SSMS
Au	ug/g	25	20	(1)	---	---	20	(1)	NAA
B	ug/g	351	357 \pm 9	(5)	358	348 - 368	356 \pm 8	(3)	TCGS
B	ug/g	---	---	---	---	---	358	(2)	ICPES
B-10	atom %	---	19.827	(1)	---	---	19.827	(1)	IDMS
Ba	ug/g	---	638	(1)	---	---	638	(1)	SSMS
Be	ug/g	---	450	(1)	---	---	450	(1)	CPAA
Bi	ug/g	---	405	(1)	---	---	405	(1)	SSMS
Ca	%	8.6	7.64	(1)	---	---	7.64	(1)	SSMS
Cd	ug/g	---	187	(1)	---	---	187	(1)	SSMS
Ce	ug/g	---	318	(1)	---	---	318	(1)	SSMS
Co	ug/g	390	389 \pm 22	(9)	390	360 - 420	391 \pm 23	(8)	PROBE
Co	ug/g	---	---	---	---	---	375	(1)	SSMS
Cr	ug/g	---	410 \pm 60	(9)	380	340 - 510	420 \pm 60	(8)	PROBE
Cr	ug/g	---	---	---	---	---	371	(1)	SSMS
Cu	ug/g	444 \pm 4	380 \pm 100	(8)	360	230 - 510	380 \pm 100	(8)	PROBE
Fe	ug/g	458 \pm 9	460	(1)	---	---	460	(1)	POL
Ga	ug/g	---	481	(1)	---	---	481	(1)	SSMS
Ge	ug/g	---	496	(1)	---	---	496	(1)	SSMS
Hf	ug/g	---	220	(1)	---	---	220	(1)	SSMS
In	ug/g	---	319	(1)	---	---	319	(1)	SSMS
K	ug/g	461	---	---	---	---	---	---	---
Li	ug/g	---	354	(1)	---	---	354	(1)	CPAA
Mg	ug/g	---	472	(1)	---	---	472	(1)	SSMS
Mn	ug/g	485 \pm 10	480 \pm 50	(9)	490	391 - 550	495 \pm 40	(8)	PROBE
Mn	ug/g	---	---	---	---	---	391	(1)	SSMS
Mo	ug/g	---	307	(1)	---	---	307	(1)	SSMS
Ni	ug/g	458.7 \pm 4	480 \pm 50	(8)	470	431 - 550	490 \pm 50	(6)	PROBE
Ni	ug/g	---	---	---	---	---	450	(1)	POL
Ni	ug/g	---	---	---	---	---	431	(1)	SSMS
Pb	ug/g	426 \pm 1	418 \pm 17	(4)	425.58	392 - 427	426.2 \pm 0.7	(3)	IDMS
Pb	ug/g	---	---	---	---	---	392	(1)	SSMS
Rb	ug/g	425.7 \pm 0.8	425.7	(1)	---	---	425.7	(1)	IDMS
Sb	ug/g	---	387	(1)	---	---	387	(1)	SSMS
Sr	ug/g	515.5 \pm 0.5	515.5	(1)	---	---	515.5	(1)	IDMS
Ta	ug/g	---	206	(1)	---	---	206	(1)	SSMS
Te	ug/g	---	259	(1)	---	---	259	(1)	SSMS
Th	ug/g	457.2 \pm 1.2	460 \pm 7	(3)	457.23	455.4 - 469	456.3	(2)	IDMS
Th	ug/g	---	---	---	---	---	469	(1)	SSMS
Ti	ug/g	437	490 \pm 70	(10)	530	361 - 560	520 \pm 50	(8)	PROBE
Ti	ug/g	---	---	---	---	---	434	(1)	POL
Ti	ug/g	---	---	---	---	---	361	(1)	SSMS
Tl	ug/g	61.8 \pm 2.5	57	(2)	---	52 - 61.8	52	(1)	SSMS
Tl	ug/g	---	---	---	---	---	61.8	(1)	IDMS
U	ug/g	461.5 \pm 1.1	453 \pm 22	(7)	461.5	413 - 471	457 \pm 23	(3)	NAA
U	ug/g	---	---	---	---	---	461.4	(2)	IDMS
U	ug/g	---	---	---	---	---	413	(1)	SSMS
U	ug/g	---	---	---	---	---	462.8	(1)	NT
U-234	atom %	---	0.0010	(1)	---	---	0.0010	(1)	IDMS
U-235	atom %	0.2376	0.2376	(2)	---	0.2376 - 0.2376	0.2376	(2)	IDMS
U-235/238	ratio	0.0024	0.0025 \pm 0.0001	(4)	0.0024	0.0023 - 0.0026	0.0025 \pm 0.0001	(4)	NAA
U-236	atom %	---	0.0043	(1)	---	---	0.0043	(1)	IDMS
U-238	atom %	---	99.7571	(1)	---	---	99.7571	(1)	IDMS
V	ug/g	---	490 \pm 60	(8)	460	410 - 560	490 \pm 60	(8)	PROBE
Zn	ug/g	433	500 \pm 140	(6)	500	320 - 650	500 \pm 140	(6)	PROBE

TABLE 610-2: INDIVIDUAL DATA FOR NBS SRM 610 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ag (ug/g)</u>					<u>Co (ug/g)</u>				
180	80		ITNA	73SHE 01	135	14		ITNA	73SHE 01
<u>As (ug/g)</u>					360	60	6	PROBE	71HEI 02
305	20		SSMS	74BER 01	360	90	6	PROBE	71HEI 02
<u>Au (ug/g)</u>					375	12		SSMS	74BER 01
20	2		ITNA	73SHE 01	390	90	6	PROBE	71HEI 02
<u>B (ug/g)</u>					390	100	6	PROBE	71HEI 02
348	13.6		ICPES	85ZAC 01	390	110	6	PROBE	71HEI 02
348	20	6	TCGS	76GLA 01	400	130	6	PROBE	71HEI 02
358	15	6	TCGS	76GLA 01	420	140	6	PROBE	71HEI 02
363	17	6	TCGS	76GLA 01	420	180	6	PROBE	71HEI 02
368	12		ICPES	82OWE 01	<u>Cr (ug/g)</u>				
<u>B-10 (atom %)</u>					340	40	6	PROBE	71HEI 02
19.827			IDMS	72CAR 01	360	40	6	PROBE	71HEI 02
<u>Ba (ug/g)</u>					370	100	6	PROBE	71HEI 02
638	24		SSMS	74BER 01	371	15		SSMS	74BER 01
<u>Be (ug/g)</u>					380	140	6	PROBE	71HEI 02
450	50		CPAA	82LAS 01	440	40	6	PROBE	71HEI 02
<u>Bi (ug/g)</u>					440	90	6	PROBE	71HEI 02
405	18		SSMS	74BER 01	500	120	6	PROBE	71HEI 02
<u>Ca (%)</u>					510	60	6	PROBE	71HEI 02
7.64	0.002		SSMS	74BER 01	<u>Cu (ug/g)</u>				
<u>Cd (ug/g)</u>					230	210	6	PROBE	71HEI 02
187	21		SSMS	74BER 01	270	150	6	PROBE	71HEI 02
<u>Ce (ug/g)</u>					350	200	6	PROBE	71HEI 02
318	14		SSMS	74BER 01	360	130	6	PROBE	71HEI 02
					420	200	6	PROBE	71HEI 02
					440	250	6	PROBE	71HEI 02
					500	100	6	PROBE	71HEI 02
					510	110	6	PROBE	71HEI 02
					<u>Fe (ug/g)</u>				
					460	10		POL	73MAI 01
					<u>Ga (ug/g)</u>				
					481	10		SSMS	74BER 01
					<u>Ge (ug/g)</u>				
					496	10		SSMS	74BER 01
					<u>Hf (ug/g)</u>				
					220	14		SSMS	74BER 01

TABLE 610-2: INDIVIDUAL DATA FOR NBS SRM 610 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>In (ug/g)</u>					<u>Sb (ug/g)</u>				
319	11		SSMS	74BER 01	387	18		SSMS	74BER 01
<u>Li (ug/g)</u>					<u>Sr (ug/g)</u>				
354	27		CPAA	82LAS 01	515.5	0.3		IDMS	73MOO 01
<u>Mg (ug/g)</u>					<u>Ta (ug/g)</u>				
472	22		SSMS	74BER 01	206	9		SSMS	74BER 01
<u>Mn (ug/g)</u>					<u>Te (ug/g)</u>				
391	7		SSMS	74BER 01	259	21		SSMS	74BER 01
440	90	6	PROBE	71HEI 02	<u>Th (ug/g)</u>				
450	90	6	PROBE	71HEI 02	455.4	1.6	17	IDMS	73BAR 01
480	100	6	PROBE	71HEI 02	457.23	0.52	17	IDMS	73BAR 01
490	40	6	PROBE	71HEI 02	469	7		SSMS	74BER 01
490	70	6	PROBE	71HEI 02	<u>Ti (ug/g)</u>				
530	70	6	PROBE	71HEI 02	361	18		SSMS	74BER 01
530	80	6	PROBE	71HEI 02	430	50	6	PROBE	71HEI 02
550	100	6	PROBE	71HEI 02	434	10		POL	73MAI 01
<u>Mo (ug/g)</u>					440	30	6	PROBE	71HEI 02
307	19		SSMS	74BER 01	530	80	6	PROBE	71HEI 02
<u>Ni (ug/g)</u>					540	70	6	PROBE	71HEI 02
431	10		SSMS	74BER 01	540	80	6	PROBE	71HEI 02
440	50	6	PROBE	71HEI 02	550	70	6	PROBE	71HEI 02
450	7		POL	73MAI 01	550	100	6	PROBE	71HEI 02
450	50	6	PROBE	71HEI 02	560	110	6	PROBE	71HEI 02
470	70	6	PROBE	71HEI 02	<u>Tl (ug/g)</u>				
480	80	6	PROBE	71HEI 02	52	35		SSMS	74BER 01
550	140	6	PROBE	71HEI 02	61.8	1		IDMS	73BAR 01
550	180	6	PROBE	71HEI 02	<u>U (ug/g)</u>				
940	420	6	PROBE	71HEI 02	413	18		SSMS	74BER 01
950	220	6	PROBE	71HEI 02	430			DNA	84GLA 02
<u>Pb (ug/g)</u>					461.3	1	17	IDMS	73BAR 01
392	11		SSMS	74BER 01	461.3	1.7	D	IDMS	72CAR 01
425.58	0.4	17	IDMS	73BAR 01	461.5	0.4	17	IDMS	73BAR 01
426.15	0.41	17	IDMS	73BAR 01	461.5	1.1	D	IDMS	72CAR 01
427	1		IDMS	83BRO 01	462.8	13.8		NT	72CAR 01
<u>Rb (ug/g)</u>					470	90	17	DNA	82CON 01
425.7	0.7		IDMS	73MOO 01	471	28	17	DNA	82CON 01

TABLE 610-2: INDIVIDUAL DATA FOR NBS SRM 610 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>U-234 (atom %)</u>					<u>V (ug/g)</u>				
0.001			IDMS	73BAR 01	206	10		SSMS	74BER 01
					410	70	6	PROBE	71HEI 02
<u>U-235 (atom %)</u>					430	70	6	PROBE	71HEI 02
0.2376			IDMS	73BAR 01	450	100	6	PROBE	71HEI 02
0.2376	0.0004		IDMS	72CAR 01	460	40	6	PROBE	71HEI 02
					500	80	6	PROBE	71HEI 02
<u>U-235/238 (ratio)</u>					530	70	6	PROBE	71HEI 02
0.0023			RTNA	86GAU 01	550	70	6	PROBE	71HEI 02
0.0024	0.0001		RTNA	85GAU 04	560	110	6	PROBE	71HEI 02
0.0025	0.0001		RTNA	84GLA 02	<u>Zn (ug/g)</u>				
0.0026	0.0001		RTNA	84GLA 11	320	130	6	PROBE	71HEI 02
<u>U-236 (atom %)</u>					320	150	6	PROBE	71HEI 02
0.0043			IDMS	73BAR 01	500	140	6	PROBE	71HEI 02
<u>U-238 (atom %)</u>					590	170	6	PROBE	71HEI 02
99.7571			IDMS	73BAR 01	600	190	6	PROBE	71HEI 02
					650	140	6	PROBE	71HEI 02

TABLE 612-1: COMPILED DATA FOR NBS SRM 612 TRACE ELEMENTS IN GLASS (revised 3/1/86)

ELEMENT	UNITS	NBS	CONSENSUS		MEDIAN	RANGE	NAA		OTHER METHODS		
		Mean ± SD	Mean ± SD	(n)			Mean ± SD	(n)	Mean ± SD	(n)	Method
Ag	ug/g	22 ± 0.3	26	(2)	---	20 - 31	31	(1)	20	(1)	AA
Al	%	1.1	1.11	(1)	---	---	1.11	(1)	---		
As	ug/g	---	47	(2)	---	35.6 - 58.1	58.1	(1)	35.6	(1)	PAA
Au	ug/g	5	5.09 ± 0.16	(3)	5	5 - 5.27	5.09 ± 0.16	(3)	---		
B	ug/g	32	33 ± 5	(4)	31	27.8 - 40	---		33.9	(2)	ICPES
B	ug/g	---	---		---	---	---		31	(1)	TCGS
B	ug/g	---	---		---	---	---		32.39	(1)	NT
B-10	atom %	---	19.827	(1)	---	---	---		19.827	(1)	IDMS
Ba	ug/g	41	36.5	(1)	---	---	36.5	(1)	---		
Be	ug/g	---	31	(1)	---	---	---		31	(1)	CPAA
Br	ug/g	---	< 1.4		---	---	< 1.4		---		
Ca	%	8.6	8.72	(2)	---	8.65 - 8.79	8.79	(1)	8.65	(1)	PAA
Ce	ug/g	39	41 ± 3	(4)	40.6	37 - 45.3	41.15	(2)	40.6	(1)	PAA
Co	ug/g	35.5 ± 1.2	35 ± 3	(5)	34.3	31 - 37.47	35 ± 3	(4)	33.3	(1)	PAA
Cr	ug/g	---	110	(2)	---	65.9 - 155	110	(2)	---		
Cs	ug/g	---	43 ± 2	(3)	43	41.1 - 44.8	42.0	(2)	44.8	(1)	PAA
Cu	ug/g	37.7 ± 0.9	37	(1)	---	---	37	(1)	---		
Dy	ug/g	35	37	(1)	---	---	37	(1)	---		
Er	ug/g	39	---		---	---	---		---		
Eu	ug/g	36	31 ± 5	(3)	32.86	26 - 35.3	31 ± 5	(3)	---		
Fe	ug/g	51 ± 2	56	(2)	---	51.3 - 60	60	(1)	51.3	(1)	POL
Gd	ug/g	39	37	(2)	---	36 - 38	---		37	(2)	TCGS
Hf	ug/g	---	42	(2)	---	32.2 - 52.29	42.2	(2)	---		
K	ug/g	64	---		---	---	---		---		
La	ug/g	36	38	(2)	---	35 - 40.2	37.6	(2)	---		
Li	ug/g	---	44	(1)	---	---	---		44	(1)	CPAA
Lu	ug/g	---	36.8	(1)	---	---	36.8	(1)	---		
Mg	ug/g	---	341	(1)	---	---	---		341	(1)	PAA
Mn	ug/g	39.6 ± 0.8	38.6	(2)	---	38.2 - 39	38.2	(1)	39	(1)	PAA
Na	%	10.4	10.6	(2)	---	10.5 - 10.68	10.68	(1)	10.5	(1)	PAA
Nb	ug/g	---	38.1	(1)	---	---	---		38.1	(1)	PAA
Nd	ug/g	36	---		---	---	---		---		
Ni	ug/g	38.8 ± 0.2	40.1	(1)	---	---	---		40.1	(1)	PAA
Pb	ug/g	38.57 ± 0.2	38.58 ± 0.16	(5)	38.56	38.37 - 38.83	---		38.6 ± 0.2	(5)	IDMS
Pb	ug/g	---	---		---	---	---		36.3	(1)	AA
Rb	ug/g	31.4 ± 0.4	32 ± 2	(5)	31.7	31.41 - 36	36	(1)	32	(1)	PAA
Rb	ug/g	---	---		---	---	---		31.425	(2)	IDMS
Sb	ug/g	---	39 ± 6	(3)	39.4	32.2 - 45.2	38.7	(2)	39.4	(1)	PAA
Sc	ug/g	---	38 ± 3	(3)	38.2	34 - 40.35	37.2	(2)	38.2	(1)	PAA
Si	%	33.6	34.04	(1)	---	---	34.04	(1)	---		
Sm	ug/g	39	35 ± 4	(3)	32.8	32.7 - 39.6	39.6	(1)	32.75	(2)	TCGS
Sr	ug/g	78.4 ± 0.2	77.6 ± 1.0	(4)	77.3	76.3 - 78.38	---		77.3	(1)	PAA
Sr	ug/g	---	---		---	---	---		78.345	(2)	IDMS
Sr-87/86	ratio	---	0.70907	(1)	---	---	---		0.70907	(1)	IDMS
Ta	ug/g	---	44	(2)	---	36.33 - 52.7	44.5	(2)	---		
Tb	ug/g	---	37	(2)	---	22 - 52.96	37.5	(2)	---		
Th	ug/g	37.79 ± 0.08	36 ± 3	(5)	37.55	31 - 38.43	35 ± 4	(3)	37.67	(2)	IDMS
Ti	ug/g	50.1 ± 0.8	53	(2)	---	50 - 55.2	---		55.2	(1)	PAA
Ti	ug/g	---	---		---	---	---		50	(1)	POL
Tl	ug/g	15.7 ± 0.3	15.7	(1)	---	---	---		15.68	(1)	IDMS
U	ug/g	37.38 ± 0.08	37.5 ± 1.3	(9)	37.37	35.74 - 40	40 ± 3	(4)	37.4 ± 0.1	(4)	IDMS
U	ug/g	---	---		---	---	---		36.32	(2)	NT
U-235	atom %	0.2392	0.2392	(1)	---	---	---		0.2392	(1)	IDMS
U-235/238	ratio	---	0.0023	(1)	---	---	0.00229	(1)	---		
V	ug/g	---	58.6	(1)	---	---	58.6	(1)	---		
Y	ug/g	---	37.9	(1)	---	---	---		37.9	(1)	PAA
Yb	ug/g	42	48	(2)	---	40 - 55	47.5	(2)	---		
Zr	ug/g	---	41.8	(1)	---	---	---		41.8	(1)	PAA

TABLE 612-2: INDIVIDUAL DATA FOR NBS SRM 612 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ag (ug/g)</u>					<u>Co (ug/g)</u>				
20	1		FAA	84HEA 01	31	1		ITNA	73SHE 01
31	7		ITNA	73SHE 01	33.3	1		PAA	80KAN 01
					34.3	2.9		ITNA	84KUL 01
<u>Al (%)</u>					37.1	2.3	6	ITNA	73KIM 01
1.1109	0.0212		ITNA	85PEN 01	37.47	4.1	6	ITNA	73KIM 01
<u>As (ug/g)</u>					<u>Cr (ug/g)</u>				
35.6	0.3		PAA	80KAN 01	65.9	3.7		ITNA	84KUL 01
58.1	7.3		ITNA	84KUL 01	155	8		ITNA	73KIM 01
<u>Au (ug/g)</u>					<u>Cs (ug/g)</u>				
5	0.2		ITNA	84KUL 01	41.1	6.6		ITNA	73KIM 01
5	1		ITNA	73SHE 01	43	2		ITNA	84KUL 01
5.27	0.11		ITNA	73KIM 01	44.8	1.2		PAA	80KAN 01
<u>B (ug/g)</u>					<u>Cu (ug/g)</u>				
27.8	2.9		ICPES	85ZAC 01	37	4		ITNA	84KUL 01
31	3		TCGS	84GLA 01	<u>Dy (ug/g)</u>				
32.39	1.04		NT	72CAR 01	37	4		ITNA	84KUL 01
40	4		ICPES	82OWE 01	<u>Eu (ug/g)</u>				
<u>B-10 (atom %)</u>					26	1		ITNA	73SHE 01
19.827			IDMS	72CAR 01	32.86	2.19		ITNA	73KIM 01
<u>Ba (ug/g)</u>					35.3	1.2		ITNA	84KUL 01
36.5	5.2		ITNA	84KUL 01	<u>Fe (ug/g)</u>				
<u>Be (ug/g)</u>					51.3	0.8		POL	73MAI 01
31	7		CPAA	82LAS 01	60	7		ITNA	84KUL 01
<u>Br (ug/g)</u>					<u>Gd (ug/g)</u>				
<	1.4		ITNA	84KUL 01	36	4	4	TCGS	85GLA 05
<u>Ca (%)</u>					38	4	4	TCGS	85GLA 05
8.65	0.14		PAA	80KAN 01	<u>Hf (ug/g)</u>				
8.79	0.72		ITNA	84KUL 01	32.2	1.6		ITNA	84KUL 01
<u>Ce (ug/g)</u>					52.29	3.11		ITNA	73KIM 01
37	2		ITNA	73SHE 01	<u>La (ug/g)</u>				
40.6	0.2		PAA	80KAN 01	35	15		ITNA	73SHE 01
41.2			UU	77HAM 02	40.2	1.2		ITNA	84KUL 01
45.3	1.5		ITNA	84KUL 01					

TABLE 612-2: INDIVIDUAL DATA FOR NBS SRM 612 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Li (ug/g)</u>					<u>Sc (ug/g)</u>				
44	8		CPAA	82LAS 01	34	3		ITNA	84KUL 01
					38.2	1.2		PAA	80KAN 01
					40.35	0.35		ITNA	73KIM 01
<u>Lu (ug/g)</u>					<u>Si (%)</u>				
36.8	0.2		ITNA	84KUL 01	34.04	0.65		ITNA	85PEN 01
<u>Mg (ug/g)</u>					<u>Sm (ug/g)</u>				
< 2412			ITNA	85PEN 01	32.7	3	4	TCGS	85GLA 05
341	16		PAA	80KAN 01	32.8	3	4	TCGS	85GLA 05
<u>Mn (ug/g)</u>					39.6	1.1		ITNA	84KUL 01
38.2	1.1		ITNA	84KUL 01	<u>Sr (ug/g)</u>				
39	2.6		PAA	80KAN 01	76.3			UU	77HAN 02
<u>Na (%)</u>					77.3	1.3		PAA	80KAN 01
10.5	0.15		PAA	80KAN 01	78.31	0.09		IDMS	83LIP 01
10.68	0.59		ITNA	84KUL 01	78.38	0.25		IDMS	73MOO 01
<u>Nb (ug/g)</u>					<u>Sr-87/86 (ratio)</u>				
38.1	1		PAA	80KAN 01	709.07	0.1	28	IDMS	83LIP 01
<u>Ni (ug/g)</u>					<u>Ta (ug/g)</u>				
40.1	1.1		PAA	80KAN 01	36.33	5.6		ITNA	73KIM 01
<u>Pb (ug/g)</u>					52.7	0.3		ITNA	84KUL 01
36.3	1.5		FAA	84HEA 01	<u>Tb (ug/g)</u>				
38.37	0.13		IDMS	86FIS 01	22	2		ITNA	84KUL 01
38.56	0.07	17	IDMS	73BAR 01	52.96	5.62		ITNA	73KIM 01
38.56	0.11		IDMS	77GUL 01	<u>Th (ug/g)</u>				
38.57	0.09	17	IDMS	73BAR 01	31	1		ITNA	73SHE 01
38.83	0.04		IDMS	83BRO 01	36	2		ITNA	84KUL 01
<u>Rb (ug/g)</u>					37.55	0.04	17	IDMS	73BAR 01
31.41	0.08		IDMS	83LIP 01	37.79	0.017	17	IDMS	73BAR 01
31.44	0.31		IDMS	73MOO 01	38.43	0.42		ITNA	73KIM 01
31.7			UU	77HAN 02	<u>Ti (ug/g)</u>				
32	1.4		PAA	80KAN 01	50	0.3		POL	73MAI 01
36	4		ITNA	84KUL 01	55.2	8.3		PAA	80KAN 01
<u>Sb (ug/g)</u>					<u>Tl (ug/g)</u>				
32.2	1.6		ITNA	84KUL 01	15.68	0.1		IDMS	73BAR 01
39.4	0.3		PAA	80KAN 01					
45.2	6.74		ITNA	73KIM 01					

TABLE 612-2: INDIVIDUAL DATA FOR NBS SRM 612 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>U (ug/g)</u>					<u>U-235/238 (atom %)</u>				
35.74			NT	80VIR 01	0.00229	0.00011		RTNA	84GLA 02
36.3	7.2	17	DNA	82CON 01					
36.9	1.8		NT	72CAR 01	<u>V (ug/g)</u>				
37.37	0.015	17	IDMS	73BAR 01	58.6	6		ITNA	84KUL 01
37.37	0.064		IDMS	86FIS 01	<u>Y (ug/g)</u>				
37.39	0.09	D	IDMS	72CAR 01	37.9	1.4		PAA	80KAN 01
37.41	0.09	17	IDMS	73BAR 01	<u>Yb (ug/g)</u>				
37.41	0.21	D	IDMS	72CAR 01	40	3		ITNA	84KUL 01
37.66	0.08		IDMS	77GUL 01	55	7.15		ITNA	73KIH 01
39	4.9	17	DNA	82CON 01	<u>Zr (ug/g)</u>				
40			DNA	84GLA 02	41.8	1.1		PAA	80KAN 01
43.6	1.6		ITNA	84KUL 01					
<u>U-235 (atom %)</u>									
0.2392	0.0004		IDMS	72CAR 01					

TABLE 614-1: COMPILED DATA FOR NBS SRM 614 TRACE ELEMENTS IN GLASS (revised 3/1/86)

ELEMENT	UNITS	NBS	CONSENSUS		MEDIAN	RANGE	METHOD MEANS		
		Mean \pm SD	Mean \pm SD	(n)			Mean \pm SD	(n)	Method
Ag	ug/g	0.42 \pm 0.04	0.52	(2)	---	0.471 - 0.57	0.57	(1)	NAA
Ag	ug/g	---	---	---	---	---	0.471	(1)	AA
Au	ng/g	500	580 \pm 300	(4)	510	280 - 1000	690 \pm 270	(3)	NAA
Au	ug/g	---	---	---	---	---	280	(1)	AA
B	ug/g	1.3 \pm 0.2	1.14	(2)	---	0.99 - 1.29	0.99	(1)	TCGS
B	ug/g	---	---	---	---	---	1.29	(1)	NT
B-10	atom %	---	19.827	(1)	---	---	19.827	(1)	IDMS
Br	ug/g	---	< 1	---	---	---	< 1	---	NAA
Ca	%	8.6	7.92	(1)	---	---	7.92	(1)	NAA
Cd	ng/g	550	---	---	---	---	---	---	---
Ce	ug/g	---	1.24	(1)	---	---	1.24	(1)	NAA
Co	ug/g	0.73 \pm 0.02	1.2 \pm 0.5	(4)	0.85	0.59 - 1.66	1.2 \pm 0.5	(4)	NAA
Cr	ug/g	---	1.81	(1)	---	---	1.81	(1)	NAA
Cs	ng/g	---	720	(2)	---	590 - 860	725	(2)	NAA
Cu	ug/g	1.37 \pm 0.07	1.61	(1)	---	---	1.61	(1)	AA
Dy	ug/g	---	1.4	(1)	---	---	1.4	(1)	NAA
Eu	ug/g	0.99 \pm 0.04	0.85 \pm 0.28	(3)	0.91	0.54 - 1.10	0.85 \pm 0.28	(3)	NAA
Fe	ug/g	13.3 \pm 1	13.8 \pm 1.0	(3)	13.5	13 - 15	15	(1)	NAA
Fe	ug/g	---	---	---	---	---	13	(1)	AA
Fe	ug/g	---	---	---	---	---	13.5	(1)	POL
Ga	ug/g	1.3	---	---	---	---	---	---	---
Gd	ug/g	---	0.75	(2)	---	0.70 - 0.80	0.75	(2)	TCGS
Hf	ug/g	---	0.88	(2)	---	0.55 - 1.2	0.88	(2)	NAA
K	ug/g	30 \pm 1	---	---	---	---	---	---	---
La	ng/g	830 \pm 20	680	(1)	---	---	680	(1)	NAA
Lu	ng/g	---	630	(1)	---	---	630	(1)	NAA
Mn	ug/g	---	< 3.8	---	---	---	< 3.8	---	NAA
Na	%	10.4	10.39	(1)	---	---	10.39	(1)	NAA
Ni	ug/g	0.95	0.95	(1)	---	---	0.95	(1)	POL
Pb	ug/g	2.32 \pm 0.04	2.30 \pm 0.06	(4)	2.32	2.22 - 2.35	2.33 \pm 0.02	(3)	IDMS
Pb	ug/g	---	---	---	---	---	2.22	(1)	AA
Rb	ug/g	0.855 \pm 0.005	0.89	(2)	---	0.855 - 0.92	0.92	(1)	NAA
Rb	ug/g	---	---	---	---	---	0.855	(1)	IDMS
Sb	ug/g	1.06	1.03 \pm 0.10	(3)	1.08	0.91 - 1.10	1.03 \pm 0.10	(3)	NAA
Sc	ng/g	590 \pm 40	720 \pm 100	(3)	680	640 - 840	720 \pm 100	(3)	NAA
Sm	ug/g	---	0.75 \pm 0.12	(3)	0.69	0.68 - 0.89	0.89	(1)	NAA
Sm	ug/g	---	---	---	---	---	0.68	(2)	TCGS
Sr	ug/g	45.8 \pm 0.1	45.82	(1)	---	---	45.82	(1)	IDMS
Ta	ug/g	---	0.97	(2)	---	0.96 - 0.98	0.97	(2)	NAA
Tb	ng/g	---	560	(2)	---	510 - 620	565	(2)	NAA
Th	ng/g	748 \pm 6	744 \pm 9	(4)	746	730 - 750	740	(2)	NAA
Th	ug/g	---	---	---	---	---	747.5	(2)	IDMS
Ti	ug/g	3.1 \pm 0.3	3.1	(1)	---	---	3.1	(1)	POL
Tl	ng/g	269 \pm 5	280	(2)	---	269 - 290	290	(1)	NAA
Tl	ug/g	---	---	---	---	---	269	(1)	IDMS
U	ug/g	0.823 \pm 0.002	0.82 \pm 0.04	(6)	0.8230	0.74 - 0.87	0.87	(1)	NAA
U	ug/g	---	---	---	---	---	0.822 \pm 0.005	(3)	IDMS
U	ug/g	---	---	---	---	---	0.7835	(2)	NT
U-235	atom %	0.2792	0.2792	(1)	---	---	0.2792	(1)	IDMS
V	ug/g	---	< 13	---	---	---	< 13	---	NAA
Yb	ug/g	---	1.06	(2)	---	0.74 - 1.38	1.06	(2)	NAA

TABLE 614-2: INDIVIDUAL DATA FOR NBS SRM 614 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ag (ug/g)</u>					<u>Cu (ug/g)</u>				
0.471	0.06		FAA	82JEN 02	<	9		ITNA	84KUL 01
0.57	0.07		ITNA	73SHE 01	1.61	0.32		FAA	82JEN 02
<u>Au (ng/g)</u>					<u>Dy (ug/g)</u>				
280	140		FAA	82JEN 02	1.4	0.3		ITNA	84KUL 01
510	20		ITNA	84KUL 01					
550	50		ITNA	73KIM 01	<u>Eu (ug/g)</u>				
1000	800		ITNA	73SHE 01	0.54	0.05		ITNA	73KIM 01
<u>B (ug/g)</u>					0.91	0.07		ITNA	84KUL 01
0.99	0.32		TCGS	84GLA 01	1.1	0.6		ITNA	73SHE 01
1.29	0.05		NT	72CAR 01	<u>Fe (ug/g)</u>				
2.5	1.7	6	TCGS	76GLA 01	13			FAA	84HEA 01
2.6	1.5	6	TCGS	76GLA 01	13.5	0.7		POL	73MAI 01
2.9	1.5	6	TCGS	76GLA 01	15	2		ITNA	84KUL 01
<u>B-10 (atom %)</u>					<u>Gd (ug/g)</u>				
19.827			IDMS	72CAR 01	0.7	0.4	4	TCGS	85GLA 05
<u>Br (ug/g)</u>					0.8	0.2	4	TCGS	85GLA 05
<	1		ITNA	84KUL 01	<u>Hf (ug/g)</u>				
<u>Ca (%)</u>					0.55	0.06		ITNA	84KUL 01
7.92	0.78		ITNA	84KUL 01	1.2	0.18		ITNA	73KIM 01
<u>Ce (ug/g)</u>					<u>La (ng/g)</u>				
1.24	0.09		ITNA	84KUL 01	<	2000		ITNA	73SHE 01
<u>Co (ug/g)</u>					680	120		ITNA	84KUL 01
0.59	0.1		ITNA	73SHE 01	<u>Lu (ng/g)</u>				
0.85	0.09		ITNA	84KUL 01	630	80		ITNA	84KUL 01
1.63	0.09		ITNA	73KIM 01	<u>Mn (ug/g)</u>				
1.66	0.17		ITNA	73KIM 01	<	3.8		ITNA	84KUL 01
<u>Cr (ug/g)</u>					<u>Na (%)</u>				
1.81	0.2		ITNA	73KIM 01	10.39	0.22		ITNA	84KUL 01
<u>Cs (ng/g)</u>					<u>Ni (ug/g)</u>				
590	50		ITNA	73KIM 01	0.95	0.08		POL	73MAI 01
860	30		ITNA	84KUL 01					

TABLE 614-2: INDIVIDUAL DATA FOR NBS SRM 614 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Pb (ug/g)</u>					<u>Th (ng/g)</u>				
2.22			FAA	84HEA 01	580	150		ITNA	73SHE 01
2.32	0.016	17	IDMS	73BAR 01	730	90		ITNA	84KUL 01
2.33	0.006	17	IDMS	73BAR 01	746	3	17	IDMS	73BAR 01
2.35	0.005		IDMS	86FIS 01	749	2	17	IDMS	73BAR 01
					750	10		ITNA	73KIM 01
<u>Rb (ug/g)</u>					<u>Ti (ug/g)</u>				
0.855	0.005		IDMS	73MOO 01	3.1	0.2		POL	73MAI 01
0.92	0.11		ITNA	84KUL 01					
<u>Sb (ug/g)</u>					<u>Tl (ng/g)</u>				
0.91	0.01		ITNA	84KUL 01	269	1		IDMS	73BAR 01
1.08	0.11		ITNA	73KIM 01	290	50		RTNA	82COH 01
1.1	0.1		ITNA	73SHE 01					
<u>Sc (ng/g)</u>					<u>U (ug/g)</u>				
640	20		ITNA	84KUL 01	0.74			NT	80VIR 01
680	230		ITNA	73SHE 01	0.817	0.009		IDMS	86FIS 01
840	10		ITNA	73KIM 01	0.823	0.0007	17	IDMS	73BAR 01
					0.823	0.002	D	IDMS	72CAR 01
					0.827	0.0025	17	IDMS	73BAR 01
<u>Sm (ug/g)</u>					0.827	0.007		NT	72CAR 01
0.68	0.1	4	TCGS	85GLA 05	0.828	0.05	D	IDMS	72CAR 01
0.69	0.1	4	TCGS	85GLA 05	0.87	0.14		ITNA	84KUL 01
0.89	0.06		ITNA	84KUL 01					
<u>Sr (ug/g)</u>					<u>U-235 (atom %)</u>				
45.82	0.09		IDMS	73MOO 01	0.2792	0.0004		IDMS	72CAR 01
<u>Ta (ug/g)</u>					<u>V (ug/g)</u>				
0.96	0.05		ITNA	84KUL 01	<	13		ITNA	84KUL 01
0.98	0.04		ITNA	73KIM 01					
<u>Tb (ng/g)</u>					<u>Yb (ug/g)</u>				
510	40		ITNA	84KUL 01	0.74	0.06		ITNA	84KUL 01
620	60		ITNA	73KIM 01	1.38	0.01		ITNA	73KIM 01

TABLE 616-1: COMPILED DATA FOR NBS SRM 616 TRACE ELEMENTS IN GLASS (revised 3/1/86)

ELEMENT	UNITS	NBS	CONSENSUS		MEDIAN	RANGE	METHOD MEANS		
		Mean \pm SD	Mean \pm SD	(n)			Mean	(n)	Method
Au	ng/g	180 \pm 10	---		---	---	---		
B	ng/g	200 \pm 20	220	(2)	---	203 - 230	230	(1)	TCGS
B	ng/g	---	---		---	---	203	(1)	NT
B-10	atom %	---	19.827	(1)	---	---	19.827	(1)	IDMS
Cu	ng/g	800 \pm 90	---		---	---	---		
Fe	ug/g	11 \pm 2	12	(2)	---	11 - 14	11	(1)	POL
Fe	ug/g	---	---		---	---	14	(1)	CPAA
Ga	ng/g	230 \pm 20	---		---	---	---		
Gd	ng/g	---	< 10		---	---	< 10		TCGS
K	ug/g	29 \pm 1	---		---	---	---		
La	ng/g	34 \pm 7	---		---	---	---		
Pb	ug/g	1.85 \pm 0.04	1.86	(2)	---	1.85 - 1.88	1.865	(2)	IDMS
Rb	ng/g	100 \pm 7	99.8	(1)	---	---	99.8	(1)	IDMS
Sb	ng/g	78 \pm 7	12	(1)	---	---	12	(1)	NAA
Sc	ng/g	26 \pm 12	20	(1)	---	---	20	(1)	NAA
Sm	ng/g	---	< 10		---	---	< 10		TCGS
Sr	ug/g	41.72 \pm 0.05	41.72	(1)	---	---	41.72	(1)	IDMS
Th	ng/g	25.2 \pm 0.7	23 \pm 4	(3)	25.2	18 - 25.5	18	(1)	NAA
Th	ng/g	---	---		---	---	25.35	(2)	IDMS
Ti	ug/g	2.5 \pm 0.7	2.5	(1)	---	---	2.5	(1)	POL
Tl	ng/g	8.2 \pm 0.5	8.2	(1)	---	---	8.2	(1)	IDMS
U	ng/g	72.1 \pm 1.3	72.3 \pm 0.5	(3)	72.5	71.7 - 72.6	72.15	(2)	IDMS
U	ng/g	---	---		---	---	72.5	(1)	NT
U-235	atom %	0.6160	0.616	(1)	---	---	0.616	(1)	IDMS

TABLE 616-2: INDIVIDUAL DATA FOR NBS SRM 616 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>B (ng/g)</u>					<u>Sc (ng/g)</u>				
203	57		NT	72CAR 01	20	4		ITNA	73SHE 01
230	130		TCGS	84GLA 01	<u>Sm (ug/g)</u>				
<u>B-10 (atom %)</u>					<	0.01	4	TCGS	85GLA 05
19.827			IDMS	72CAR 01	<u>Sr (ug/g)</u>				
<u>Fe (ug/g)</u>					41.72	0.02		IDMS	73MOO 01
11	0.8		POL	73MAI 01	<u>Th (ng/g)</u>				
14	3		CPAA	74SWI 01	18	2		ITNA	73SHE 01
<u>Gd (ug/g)</u>					25.2	0.3	17	IDMS	73BAR 01
<	0.01	4	TCGS	85GLA 05	25.5	1.5	17	IDMS	73BAR 01
<u>Pb (ug/g)</u>					<u>Ti (ug/g)</u>				
1.85	0.018	17	IDMS	73BAR 01	2.5	0.2		POL	73MAI 01
1.88	0.014	17	IDMS	73BAR 01	<u>Tl (ng/g)</u>				
<u>Rb (ng/g)</u>					8.2	0.1		IDMS	73BAR 01
99.8	0.6		IDMS	73MOO 01	<u>U (ng/g)</u>				
<u>Sb (ng/g)</u>					71.7	0.5	17	IDMS	73BAR 01
12	20		ITNA	73SHE 01	71.7	1.4	D	IDMS	72CAR 01
					72.5	1.5		NT	72CAR 01
					72.6	0.4	17	IDMS	73BAR 01
					72.9	1.7	D	IDMS	72CAR 01
					<u>U-235 (atom %)</u>				
					0.616	0.001		IDMS	72CAR 01

TABLE 633-1: COMPILED DATA FOR NBS SRM 633 PORTLAND CEMENT (RED CAP)
(revised 3/1/86)

ELEMENT	UNITS	NBS Mean	CONSENSUS Mean (n)	RANGE	METHOD
Al	%	2.0	2.00 (2)	1.95 - 2.06	XRF
B	ug/g	< 100	---	---	---
Ca	%	45.34	46.11 (2)	46.02 - 46.20	XRF
F	ug/g	800	---	---	---
Fe	%	2.94	2.92 (1)	---	XRF
K	ug/g	1400	1410 (1)	---	XRF
LOI	%	0.75	---	---	---
Mg	ug/g	6300	5900 (1)	---	XRF
Mn	ug/g	280	---	---	---
Na	ug/g	4700	---	---	---
P	ug/g	1050	---	---	---
S	%	0.88	1.8 (2)	0.88 - 2.78	XRF
Si	%	10.22	10.22 (2)	10.2 - 10.25	XRF
Sr	ug/g	2600	---	---	---
Ti	ug/g	1440	---	---	---
Zn	ug/g	< 80	---	---	---

TABLE 633-2: INDIVIDUAL DATA FOR NBS SRM 633 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Al (%)</u>					<u>Mg (ug/g)</u>				
1.95			XRF	74AND 03	5900			XRF	79FRE 01
2.06			XRF	79FRE 01					
<u>Ca (%)</u>					<u>S (%)</u>				
46.02			XRF	79FRE 01	0.88			XRF	79FRE 01
46.2			XRF	74AND 03	2.78			XRF	79FRE 01
<u>Fe (%)</u>					<u>Si (%)</u>				
2.92			XRF	79FRE 01	10.2			XRF	74AND 03
					10.25			XRF	79FRE 01
<u>K (ug/g)</u>									
1410			XRF	79FRE 01					

TABLE 634-1: COMPILED DATA FOR NBS SRM 634 PORTLAND CEMENT (GOLD CAP)
(revised 3/1/86)

ELEMENT	UNITS	NBS Mean	CONSENSUS Mean (n)	METHOD
Al	%	2.76	2.7 (1)	XRF
B	ug/g	< 100	---	---
Ca	%	44.74	45 (1)	XRF
F	ug/g	700	---	---
Fe	%	1.98	---	---
K	ug/g	3500	---	---
LOI	%	1.61	---	---
Mn	ug/g	1950	---	---
Na	ug/g	1100	---	---
P	ug/g	440	---	---
S	ug/g	8840	---	---
Si	%	9.68	9.57 (1)	XRF
Sr	ug/g	1000	---	---
Ti	ug/g	1800	---	---
Zn	ug/g	160	---	---

TABLE 634-2: INDIVIDUAL DATA FOR NBS SRM 634
(revised 3/1/86)

Conc	Uncer	Com	Method	Reference
<u>Al (%)</u>				
2.7			XRF	74AND 03
<u>Ca (%)</u>				
45			XRF	74AND 03
<u>Si (%)</u>				
9.57			XRF	74AND 03

TABLE 635-1: COMPILED DATA FOR NBS SRM 635 PORTLAND CEMENT (BLUE CAP)
(revised 3/1/86)

ELEMENT	UNITS	NBS Mean	CONSENSUS Mean (n)	RANGE	METHOD
Al	%	3.33	3.36 (2)	3.33 - 3.40	XRF
Ca	%	42.06	42.82 (2)	42.8 - 42.84	XRF
F	ug/g	300	---	---	---
Fe	%	1.82	1.85 (1)	---	XRF
K	ug/g	3700	3800 (1)	---	XRF
LOI	%	3.25	---	---	---
Mg	ug/g	---	7120 (1)	---	XRF
Mn	ug/g	630	---	---	---
Na	ug/g	500	---	---	---
P	ug/g	740	---	---	---
S	%	2.83	2.82 (1)	---	CB
Si	%	8.6	8.58 (2)	8.50 - 8.65	XRF
Sr	ug/g	1780	---	---	---
Ti	ug/g	1900	---	---	---
Zn	ug/g	80	---	---	---

TABLE 635-2: INDIVIDUAL DATA FOR NBS SRM 635 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Al (%)</u>					<u>K (ug/g)</u>				
3.33			XRF	79FRE 01	3800			XRF	79FRE 01
3.4			XRF	74AND 03					
<u>Ca (%)</u>					<u>Mg (ug/g)</u>				
42.8			XRF	74AND 03	7120			XRF	79FRE 01
42.84			XRF	79FRE 01	<u>S (%)</u>				
<u>Fe (%)</u>					2.82			CB	84LEC 02
1.85			XRF	79FRE 01	<u>Si (%)</u>				
					8.5			XRF	74AND 03
					8.65			XRF	79FRE 01

TABLE 636-1: COMPILED DATA FOR NBS SRM 636 PORTLAND CEMENT (YELLOW CAP)
(revised 3/1/86)

ELEMENT	UNITS	NBS Mean	CONSENSUS Mean (n)	RANGE	METHOD
Al	%	1.6	1.72 (2)	1.68 - 1.75	XRF
Ca	%	45.43	45.46 (2)	45.43 - 45.5	XRF
F	ug/g	500	---	---	---
Fe	%	1.12	1.11 (1)	---	XRF
K	ug/g	4900	4650 (1)	---	XRF
LOI	%	1.16	---	---	---
Mg	%	---	2.31 (1)	---	XRF
Mn	ug/g	840	---	---	---
Na	ug/g	820	---	---	---
P	ug/g	390	---	---	---
S	%	0.924	0.94 (2)	0.925 - 0.964	CB, XRF
Si	%	10.84	10.72 (2)	10.70 - 10.75	XRF
Sr	ug/g	340	---	---	---
Ti	ug/g	1000	---	---	---
Zn	ug/g	240	---	---	---

TABLE 636-2: INDIVIDUAL DATA FOR NBS SRM 636 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Al (%)</u>					<u>K (ug/g)</u>				
1.68			XRF	79FRE 01	4650			XRF	79FRE 01
1.75			XRF	74AND 03					
<u>Ca (%)</u>					<u>Mg (%)</u>				
45.43			XRF	79FRE 01	2.31			XRF	79FRE 01
45.5			XRF	74AND 03					
<u>Fe (%)</u>					<u>S (%)</u>				
1.11			XRF	79FRE 01	0.925			CB	84LEC 02
					0.964			XRF	79FRE 01
					<u>Si (%)</u>				
					10.7			XRF	74AND 03
					10.75			XRF	79FRE 01

TABLE 637-1: COMPILED DATA FOR NBS SRM 637 PORTLAND CEMENT (PINK CAP)
(revised 3/1/86)

ELEMENT	UNITS	NBS Mean	CONSENSUS Mean (n)	RANGE	METHOD
Al	%	1.74	1.76 (2)	1.75 - 1.76	XRF
Ca	%	47.22	47.3 (2)	47.09 - 47.5	XRF
F	ug/g	400	---	---	---
Fe	%	1.26	1.22 (1)	---	XRF
K	ug/g	2100	2080 (1)	---	XRF
LOI	%	1.68	---	---	---
Mg	ug/g	---	3900 (1)	---	XRF
Mn	ug/g	420	---	---	---
Na	ug/g	1100	---	---	---
P	ug/g	1090	---	---	---
S	%	0.952	0.964 (1)	---	XRF
Si	%	10.77	10.8 (2)	10.8 - 10.8	XRF
Sr	ug/g	760	---	---	---
Ti	ug/g	1260	---	---	---
Zn	ug/g	80	---	---	---

TABLE 637-2: INDIVIDUAL DATA FOR NBS SRM 637 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Al (%)</u>					<u>Mg (ug/g)</u>				
1.75			XRF	74AND 03	3900			XRF	79FRE 01
1.76			XRF	79FRE 01					
<u>Ca (%)</u>					<u>S (%)</u>				
47.09			XRF	79FRE 01	0.964			XRF	79FRE 01
47.5			XRF	74AND 03					
<u>Fe (%)</u>					<u>Si (%)</u>				
1.22			XRF	79FRE 01	10.8			XRF	79FRE 01
					10.8			XRF	74AND 03
<u>K (ug/g)</u>									
2080			XRF	79FRE 01					

TABLE 638-1: COMPILED DATA FOR NBS SRM 638 PORTLAND CEMENT (GREEN CAP)
(revised 3/1/86)

ELEMENT	UNITS	NBS Mean	CONSENSUS Mean (n)	RANGE	METHOD
Al	%	2.35	2.41 (2)	2.40 - 2.42	XRF
B	ug/g	< 100	---	---	---
Ca	%	44.39	44.35 (2)	44.3 - 44.4	XRF
F	ug/g	400	---	---	---
Fe	%	2.48	2.49 (1)	---	XRF
K	ug/g	4900	4900 (1)	---	XRF
LOI	%	0.95	---	---	---
Mg	%	---	2.26 (1)	---	XRF
Mn	ug/g	350	---	---	---
Na	ug/g	960	---	---	---
P	ug/g	260	---	---	---
S	%	0.936	0.984 (1)	---	XRF
Si	%	10.03	9.99 (2)	9.98 - 10.0	XRF
Sr	ug/g	590	---	---	---
Ti	ug/g	1500	---	---	---
Zn	ug/g	720	---	---	---

TABLE 638-2: INDIVIDUAL DATA FOR NBS SRM 638 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Al (%)</u>					<u>K (ug/g)</u>				
2.4			XRF	74AND 03	4900			XRF	79FRE 01
2.42			XRF	79FRE 01					
<u>Ca (%)</u>					<u>Mg (%)</u>				
44.3			XRF	74AND 03	2.26			XRF	79FRE 01
44.4			XRF	79FRE 01					
<u>Fe (%)</u>					<u>S (%)</u>				
2.49			XRF	79FRE 01	0.984			XRF	79FRE 01
					<u>Si (%)</u>				
					9.98			XRF	79FRE 01
					10			XRF	74AND 03

TABLE 639-1: COMPILED DATA FOR NBS SRM 639 PORTLAND CEMENT (CLEAR CAP)
(revised 3/1/86)

ELEMENT	UNITS	NBS Mean	CONSENSUS Mean (r.)	RANGE	METHOD
Al	%	2.26	2.3 (2)	2.3 - 2.3	XRF
Ca	%	47.02	47.14 (2)	47.07 - 47.2	XRF
F	ug/g	200	---	---	---
Fe	%	1.68	1.65 (1)	---	XRF
K	ug/g	500	500 (1)	---	XRF
LOI	%	1.0	---	---	---
Mg	ug/g	---	7120 (1)	---	XRF
Mn	ug/g	560	---	---	---
Na	ug/g	480	---	---	---
P	ug/g	350	---	---	---
S	%	0.992	0.98 (1)	---	XRF
Si	%	10.09	10.04 (2)	10.0 - 10.09	XRF
Sr	ug/g	1270	---	---	---
Ti	ug/g	1860	---	---	---
Zn	ug/g	80	---	---	---

TABLE 639-2: INDIVIDUAL DATA FOR NBS SRM 639 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Al (%)</u>					<u>K (ug/g)</u>				
2.3			XRF	79FRE 01	500			XRF	79FRE 01
2.3			XRF	74AND 03					
<u>Ca (%)</u>					<u>Mg (ug/g)</u>				
47.07			XRF	79FRE 01	7120			XRF	79FRE 01
47.2			XRF	74AND 03	<u>S (%)</u>				
<u>Fe (%)</u>					0.98			XRF	79FRE 01
1.65			XRF	79FRE 01	<u>Si (%)</u>				
					10			XRF	74AND 03
					10.09			XRF	79FRE 01

TABLE 688-1: COMPILED DATA FOR NBS SRM 688 BASALT (revised 3/1/86)

ELEMENT	UNITS	NBS Mean \pm SD	CONSENSUS Mean \pm SD (n)	MEDIAN	RANGE	NAA Mean \pm SD (n)	ICPES Mean (n)	XRF Mean (n)	OTHER METHODS	
									Mean \pm	SD (n) Method
Al	%	9.18 \pm 0.05	9.17 \pm 0.16 (7)	9.18	8.89 - 9.34	8.89 \pm 0.35 (3)	9.04 (1)	9.34 (1)	9.22 \pm 0.07 (3)	TCGS
As	ug/g	---	2.50 (2)	---	2.33 - 2.68	2.50 (2)	---	---	---	---
Au	ng/g	---	2.1 (2)	---	0.9 - 3.3	2.1 (2)	---	---	---	---
B	ug/g	---	1.33 \pm 0.15 (3)	1.2	1.2 - 1.5	---	---	---	1.22 \pm 0.26 (4)	TCGS
Ba	ug/g	200	197 \pm 12 (5)	200	178 - 210	202 \pm 7 (3)	178 (1)	200 (1)	---	---
Be	ng/g	---	700 (2)	---	200 - 1200	---	200 (1)	---	1200 (1)	OES
C-Inorg	ug/g	140	---	---	---	---	---	---	---	---
Ca	%	8.7	8.47 \pm 0.36 (7)	8.7	7.9 - 8.82	8.2 (2)	8.82 (1)	8.75 (1)	8.43 \pm 0.46 (3)	TCGS
Ce	ug/g	13.3	13 \pm 2 (6)	12.87	10.1 - 16.7	13.4 \pm 2.3 (5)	11.3 (1)	---	---	---
Cl	ug/g	---	33.9 \pm 2.6 (3)	35	31 - 35.8	---	---	---	35 (2)	TCGS
Cl	ug/g	---	---	---	---	---	---	---	31 (1)	ISE
Co	ug/g	49.7	49 \pm 3 (7)	47.5	46.1 - 55.6	50 \pm 4 (5)	47 (1)	50 (1)	---	---
Cr	ug/g	332 \pm 9	310 \pm 50 (7)	328	230 - 377	337 \pm 22 (5)	260 (1)	230 (1)	---	---
Cs	ng/g	---	240 \pm 150 (3)	210	110 - 400	240 \pm 150 (3)	---	---	---	---
Cu	ug/g	96	90 (1)	---	---	---	90 (1)	---	---	---
Dy	ug/g	---	3.4 \pm 0.2 (6)	3.4	3.1 - 3.8	3.3 \pm 0.2 (3)	3.8 (1)	---	3.4 (2)	AA
Er	ug/g	---	2.11 \pm 0.18 (3)	2.2	1.9 - 2.22	---	1.9 (1)	---	2.21 (2)	AA
Eu	ug/g	1.07	1.01 \pm 0.02 (6)	1.01	0.99 - 1.04	1.01 \pm 0.02 (5)	1.01 (1)	---	---	---
F	ug/g	200	---	---	---	---	---	---	---	---
Fe	%	7.23 \pm 0.03	7.17 \pm 0.11 (8)	7.19	7.03 - 7.34	7.17 \pm 0.07 (3)	7.34 (1)	7.19 (1)	7.1 \pm 0.12 (3)	TCGS
Fe203	%	---	1.8 (1)	---	---	---	---	---	1.8 (1)	CALC
FeO	%	7.64 \pm 0.03	7.645 (2)	---	7.64 - 7.65	---	---	---	7.65 (1)	COLOR
FeO	%	---	---	---	---	---	---	---	7.64 (1)	TITR
Ga	ug/g	---	17.4 (2)	---	17 - 17.7	37.4 (2)	17 (1)	---	---	---
Gd	ug/g	---	3.2 \pm 0.4 (7)	3.3	2.5 - 3.7	2.5 (1)	3.6 (1)	---	3.23 \pm 0.38 (5)	TCGS
H	ug/g	---	400 (2)	---	390 - 410	---	---	---	400 (2)	TCGS
H2O+	%	---	0.14 (1)	---	---	---	---	---	0.14 (1)	COUL
H2O-	%	---	0.11 (1)	---	---	---	---	---	0.11 (1)	COUL
Hf	ug/g	1.6	1.55 \pm 0.08 (3)	1.58	1.46 - 1.62	1.55 \pm 0.08 (3)	---	---	---	---
Ho	ng/g	---	810 \pm 10 (3)	810	800 - 820	---	800 (1)	---	815 (2)	AA
Ir	ng/g	---	< 1.8	---	---	< 1.8	---	---	---	---
K	ug/g	1550 \pm 70	1590 \pm 70 (5)	1590	1530 - 1700	---	1620 (1)	1590 (1)	1590 \pm 100 (3)	TCGS

TABLE 688-1: COMPILED DATA FOR NBS SRM 688 BASALT (cont.)

ELEMENT	UNITS	NBS		CONSENSUS		MEDIAN	RANGE		NAA		ICPES	XRF	OTHER METHODS	
		Mean	SD	Mean	SD (n)				Mean	SD (n)			Mean	SD (n) Method
La	ug/g	---	---	5.3 ± 0.4	(7)	5.3	4.8 - 5.9	---	5.4 ± 0.5	(5)	5.3 (1)	5.0 (1)	---	---
Li	ug/g	---	---	7.0	(1)	---	---	---	---	---	7.0 (1)	---	---	---
Lu	ng/g	340	---	350 ± 40	(5)	340	330 - 420	---	360 ± 40	(4)	330 (1)	---	---	---
Mg	%	5.1	---	5.26 ± 0.22	(7)	5.22	5 - 5.7	---	5.56	(2)	5.08 (1)	5.22 (1)	5.44 ± 0.23	(3) TCGS
Mg	%	---	---	---	---	---	---	---	---	---	---	---	5.2	(1) AA
Mn	ug/g	1290 ± 20	---	1210 ± 60	(3)	1220	1120 - 1290	---	1200 ± 80	(3)	1240 (1)	1220 (1)	1190 ± 60	(3) TCGS
Na	%	1.6 ± 0.02	---	1.55 ± 0.08	(8)	1.57	1.39 - 1.63	---	1.50 ± 0.10	(4)	1.63 (1)	1.57 (1)	1.61	(2) TCGS
Nb	ug/g	---	---	5.0	(2)	---	5 - 5	---	---	---	5.0 (1)	5.0 (1)	---	---
Nd	ug/g	---	---	9.6 ± 1.1	(3)	9.95	8.58 - 10.4	---	9.2	(2)	10.4 (1)	---	---	---
Ni	ug/g	150	---	153 ± 30	(4)	143	123 - 186	---	154	(2)	143 (1)	180 (1)	---	---
P	ug/g	580 ± 10	---	700 ± 200	(3)	620	560 - 930	---	---	---	560 (1)	620 (1)	930	(1) COLOR
Pb	ug/g	3.3 ± 0.2	---	< 4	---	---	---	---	---	---	< 4	---	---	---
Pr	ug/g	---	---	2.4	(1)	---	---	---	---	---	2.4 (1)	---	---	---
Rb	ug/g	1.91 ± 0.01	---	2.6	(2)	---	2.18 - 3.0	---	2.18	(1)	---	3.0 (1)	---	---
Sb	ng/g	---	---	300 ± 200	(3)	420	87 - 466	---	300 ± 200	(3)	---	---	---	---
Sc	ug/g	38.1	---	38 ± 3	(7)	36.3	35.2 - 43.3	---	36.7 ± 1.5	(6)	43.3 (1)	---	---	---
Se	ug/g	---	---	< 3	---	---	---	---	< 3	---	---	---	---	---
Si	%	22.6 ± 0.05	---	22.52 ± 0.15	(4)	22.39	22.39 - 22.69	---	---	---	---	22.69 (1)	22.6	(1) COLOR
Si	%	---	---	---	---	---	---	---	---	---	---	---	22.4	(2) TCGS
Sm	ug/g	2.79	---	2.5 ± 0.2	(12)	2.4	2.09 - 2.9	---	2.4 ± 0.2	(6)	2.9 (1)	---	2.44 ± 0.12	(5) TCGS
Sr	ug/g	169.2 ± 0.7	---	172 ± 4	(4)	170.3	170 - 179	---	179	(1)	170 (1)	171 (2)	---	---
Ta	ng/g	---	---	310 ± 70	(3)	310	246 - 380	---	310 ± 70	(3)	---	---	---	---
Tb	ng/g	448	---	520 ± 40	(5)	520	462 - 580	---	520 ± 40	(5)	---	---	---	---
Th	ng/g	330 ± 20	---	360 ± 80	(3)	320	310 - 460	---	360 ± 80	(3)	---	---	---	---
Ti	ug/g	7000 ± 60	---	7090 ± 190	(6)	7000	6900 - 7390	---	7000	(1)	7390 (1)	7130 (1)	7000 ± 170	(3) TCGS
Tm	ng/g	---	---	290 ± 60	(3)	264	250 - 360	---	360	(1)	---	---	257	(2) AA
U	ng/g	370	---	310 ± 24	(4)	310	280 - 340	---	310 ± 25	(4)	---	---	---	---
V	ug/g	250	---	242 ± 8	(4)	235	235 - 248	---	242	(2)	248 (1)	235 (1)	---	---
Y	ug/g	---	---	17 ± 2	(3)	18	14.8 - 19.5	---	---	---	19.5 (1)	16.4 (2)	---	---
Yb	ug/g	2.09	---	2.05 ± 0.20	(7)	2.06	1.77 - 2.36	---	2.04 ± 0.23	(5)	2.2 (1)	---	1.97	(1) AA
Zn	ug/g	58	---	84 ± 10	(4)	79	73 - 94	---	90	(1)	79 (1)	73 (1)	94	(1) AA
Zr	ug/g	---	---	60.6 ± 1.9	(5)	60.8	58.6 - 63	---	59.7	(2)	63 (1)	60.4 (2)	---	---

TABLE 688-2: INDIVIDUAL DATA FOR NBS SRM 688 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Al (%)</u>					<u>Ce (ug/g)</u>				
8.54	0.39		ITNA	82GRA 01	10.1	3.9		ITNA	82GRA 01
8.89	0.11		ITNA	85GLA 01	11.3	0.4		ICPES	83CRO 01
9.04	0.05		ICPES	83CRO 01	12.87	0.2		ITNA	83BOY 01
9.18	0.09		TCGS	85AND 01	13.4	0.6		ITNA	85GLA 01
9.18	0.09		TCGS	83AND 01	13.7	0.5		RTNA	85GAU 04
9.24	0.1		IENA	85GLA 02	16.7	1		RTNA	84GLA 11
9.3	0.2		TCGS	82GRA 01	25	25		WXRF	85GLA 01
9.34	0.08		WXRF	85GLA 01					
<u>As (ug/g)</u>					<u>Cl (ug/g)</u>				
2.33	0.05		ITNA	83BOY 01	31	3		ISE	86ELS 01
2.68	0.54		ITNA	82GRA 01	35	1		TCGS	85AND 01
					35.8	0.8		TCGS	83AND 01
<u>Au (ng/g)</u>					<u>Co (ug/g)</u>				
0.9	0.4		ITNA	82GRA 01	46.1	0.5		ITNA	85GLA 01
3.3	0.1		ITNA	83BOY 01	46.6	0.9		ITNA	84GLA 11
					47	1		ICPES	83CRO 01
<u>B (ug/g)</u>					47.5	1.5		ITNA	82GRA 01
<	3		OES	83MIL 01	50	3		WXRF	85GLA 01
0.88	0.14		TCGS	82GRA 01	51.9	0.5		ITNA	83BOY 01
1.2	0.2		TCGS	84GLA 01	55.6	1.2		ITNA	84GLA 02
1.3	0.2		TCGS	83AND 01					
1.5	0.2		TCGS	85AND 01	<u>Cr (ug/g)</u>				
<u>Ba (ug/g)</u>					230	25		WXRF	85GLA 01
178	2		ICPES	83CRO 01	260	20		ICPES	83CRO 01
197	33		ITNA	82GRA 01	322	4		ITNA	86GAU 01
200	30		ITNA	85GLA 01	328	15		ITNA	82GRA 01
200	60		WXRF	85GLA 01	330	4		ITNA	85GLA 01
210	30		ITNA	84GLA 02	330	10		ITNA	84GLA 02
					377	4		ITNA	83BOY 01
<u>Be (ng/g)</u>					<u>Cs (ng/g)</u>				
200	50		ICPES	83CRO 01	<	400		ITNA	84GLA 11
1200			OES	83MIL 01	<	600		ITNA	83BOY 01
<u>Ca (%)</u>					110	60		ITNA	85GLA 01
7.9	0.2		TCGS	82GRA 01	210	110		ITNA	84GLA 02
8.2	0.6		ITNA	82GRA 01	400			ITNA	86GAU 01
8.2	0.6		ITNA	85GLA 01	<u>Cu (ug/g)</u>				
8.7	0.09		TCGS	83AND 01	90	1		ICPES	83CRO 01
8.7	0.09		TCGS	85AND 01					
8.75	0.02		WXRF	85GLA 01					
8.82	0.02		ICPES	83CRO 01					

TABLE 688-2: INDIVIDUAL DATA FOR NBS SRM 688 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Dy (ug/g)</u>					<u>Gd (ug/g)</u>				
3.1	0.3		RTNA	85GAU 04	2.5			ITNA	82GRA 01
3.2	0.8		ITNA	83BOY 01	2.82	0.08		TCGS	82GRA 01
3.4	0.14		FAA	84GLA 11	2.88	0.1		TCGS	83AND 01
3.4	0.5		FAA	85GAU 04	3.3	0.5	4	TCGS	85GLA 05
3.53	0.17		RTNA	84GLA 11	3.46	0.1		TCGS	85AND 01
3.8	0.2		ICPES	83CRO 01	3.6	0.3		ICPES	83CRO 01
					3.7	0.4	4	TCGS	85GLA 05
<u>Er (ug/g)</u>					<u>H (ug/g)</u>				
1.9	0.1		ICPES	83CRO 01	390	10		TCGS	83AND 01
2.2	0.4		FAA	85GAU 04	410	10		TCGS	85AND 01
2.22	0.08		FAA	84GLA 11					
<u>Eu (ug/g)</u>					<u>H2O+ (%)</u>				
0.919	0.048		ITNA	82GRA 01	0.14	0.01		COUL	85GLA 01
0.99	0.06		ITNA	85GLA 01					
1.001	0.01		ITNA	83BOY 01	<u>H2O- (%)</u>				
1.01	0.02		ICPES	83CRO 01					
1.01	0.04		RTNA	85GAU 04	0.11	0.01		COUL	85GLA 01
1.01	0.05		ITNA	84GLA 02					
1.04	0.04		RTNA	84GLA 11	<u>Hf (ug/g)</u>				
<u>Fe (%)</u>					1.46	0.13		ITNA	84GLA 02
7.03	0.1		TCGS	85AND 01	1.58	0.14		ITNA	82GRA 01
7.03	0.1		TCGS	83AND 01	1.62	0.13		ITNA	85GLA 01
7.1	0.06		ITNA	84GLA 02	<u>Ho (ng/g)</u>				
7.19	0.02		WXRF	85GLA 01	800	50		ICPES	83CRO 01
7.19	0.17		ITNA	85GLA 01	810	60		FAA	85GAU 04
7.23	0.17		TCGS	82GRA 01	820	20		FAA	84GLA 11
7.23	0.19		ITNA	82GRA 01	<u>Ir (ng/g)</u>				
7.34	0.03		ICPES	83CRO 01					
7.82	0.08		ITNA	83BOY 01	<	1.8		ITNA	83BOY 01
<u>FE2O3 (%)</u>					<u>K (ug/g)</u>				
1.8	0.17		CALC	85GLA 01	1530	60		TCGS	83AND 01
<u>FeO (%)</u>					1530	60		TCGS	85AND 01
7.64			TITR	84GOL 01	1590	75		WXRF	85GLA 01
7.65	0.15		COLOR	85GLA 01	1620	30		ICPES	83CRO 01
					1700	100		TCGS	82GRA 01
<u>Ga (ug/g)</u>									
17	7		ICPES	83CRO 01					
17.7	1.1		ITNA	83BOY 01					
57	10		ITNA	82GRA 01					

TABLE 688-2: INDIVIDUAL DATA FOR NBS SRM 688 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>La (ug/g)</u>					<u>Na (%)</u>				
4.8	0.4		RTNA	84GLA 11	1.05	0.07		TCGS	82GRA 01
4.96	0.05		ITNA	83BOY 01	1.39	0.12		ITNA	82GRA 01
5	2.5		WXRF	85GLA 01	1.48	0.02		ITNA	85GAU 04
5.3	0.1		ICPES	83CRO 01	1.51	0.08		ITNA	85GLA 01
5.3	0.3		RTNA	85GAU 04	1.57	0.02		WXRF	85GLA 01
5.9	0.2		ITNA	84GLA 02	1.61	0.01		ITNA	84GLA 02
5.9	0.6		ITNA	85GLA 01	1.61	0.06		TCGS	83AND 01
7.54	0.93		ITNA	82GRA 01	1.61	0.06		TCGS	85AND 01
					1.63	0.05		ICPES	83CRO 01
<u>Li (ug/g)</u>					<u>Nb (ug/g)</u>				
7	1		ICPES	83CRO 01	5	1		WXRF	84KYL 01
					5	1		ICPES	83CRO 01
<u>Lu (ng/g)</u>					<u>Nd (ug/g)</u>				
330	3		ITNA	83BOY 01	<	10		ITNA	85GLA 01
330	10		ICPES	83CRO 01	8.38	0.16		ITNA	83BOY 01
340	40		ITNA	84GLA 11	9.95	1.08		ITNA	82GRA 01
342	57		ITNA	82GRA 01	10.4	0.5		ICPES	83CRO 01
420	60		RTNA	84GLA 11	15	1		RTNA	84GLA 11
<u>Mg (%)</u>					<u>Ni (ug/g)</u>				
3.9	0.8		ITNA	82GRA 01	123	29		ITNA	82GRA 01
5	0.12		ITNA	85GLA 01	143	2		ICPES	83CRO 01
5.08	0.02		ICPES	83CRO 01	180	50		WXRF	85GLA 01
5.2			AA	85GAU 04	186	13		ITNA	83BOY 01
5.22	0.02		WXRF	85GLA 01					
5.3	0.2		TCGS	83AND 01					
5.31	0.18		TCGS	85AND 01					
5.7	0.4		TCGS	82GRA 01					
6.12	0.12		IENA	85GLA 02					
<u>Mn (ug/g)</u>					<u>P (ug/g)</u>				
1120	60		TCGS	82GRA 01	560	20		ICPES	83CRO 01
1140	30		ITNA	85GLA 01	620	20		WXRF	85GLA 01
1180	70		ITNA	82GRA 01	930			COLOR	85GAU 04
1220	40		WXRF	85GLA 01					
1230	40		TCGS	83AND 01					
1230	40		TCGS	85AND 01					
1240	20		ICPES	83CRO 01					
1290	60		ITNA	84GLA 02					
					<u>Pb (ug/g)</u>				
					<	4		ICPES	83CRO 01
					<u>Pr (ug/g)</u>				
					2.4	0.6		ICPES	83CRO 01
					<u>Rb (ug/g)</u>				
					<	10		ITNA	85GLA 01
					2.18	0.26		ITNA	83BOY 01
					3	3		WXRF	85GLA 01
					32.7	1		WXRF	84KYL 01

TABLE 688-2: INDIVIDUAL DATA FOR NBS SRM 688 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Sb (ng/g)</u>					<u>Ta (ng/g)</u>				
<	200		ITNA	85GLA 01	246	58		ITNA	82GRA 01
87	3		ITNA	83BOY 01	310	60		ITNA	85GLA 01
420			ITNA	84GLA 02	380	70		ITNA	84GLA 02
466	207		ITNA	82GRA 01	<u>Tb (ng/g)</u>				
<u>Sc (ug/g)</u>					462	25		ITNA	82GRA 01
35.2	0.4		ITNA	85GLA 01	512	10		ITNA	83BOY 01
35.5	0.1		ITNA	84GLA 11	520	60		ITNA	84GLA 02
36.1	0.9		ITNA	82GRA 01	535	24		RTNA	84GLA 11
36.3	0.5		ITNA	84GLA 02	580	50		ITNA	85GLA 01
38.3	0.4		ITNA	83BOY 01	<u>Th (ng/g)</u>				
38.9	0.2		ITNA	86GAU 01	310	60		ITNA	85GLA 01
43.3	0.5		ICPES	83CRO 01	320			ITNA	85GAU 04
<u>Se (ug/g)</u>					460	130		ITNA	84GLA 02
<	3		ITNA	83BOY 01	<u>Ti (ug/g)</u>				
<u>Si (%)</u>					6900	100		TCGS	83AND 01
22.39	0.08		TCGS	85AND 01	6910	100		TCGS	85AND 01
22.39	0.08		TCGS	83AND 01	7000	700		ITNA	82GRA 01
22.6			COLOR	85GAU 04	7130	90		WXRF	85GLA 01
22.69	0.15		WXRF	85GLA 01	7200	200		TCGS	82GRA 01
24.6	0.6		TCGS	82GRA 01	7390	90		ICPES	83CRO 01
<u>Sm (ug/g)</u>					<u>Tm (ng/g)</u>				
2.09	0.22		ITNA	82GRA 01	250	60		FAA	85GAU 04
2.29	0.03		ITNA	83BOY 01	264	15		FAA	84GLA 11
2.3	0.3		ITNA	85GLA 01	360	36		ITNA	83BOY 01
2.31	0.08		TCGS	82GRA 01	<u>U (ng/g)</u>				
2.35	0.02		TCGS	83AND 01	280			DNA	84GLA 02
2.4	0.2	4	TCGS	85GLA 05	310			DNA	86GAU 01
2.46	0.14		RTNA	85GAU 04	310	40		DNA	85GLA 01
2.5	0.2	4	TCGS	85GLA 05	340	80		ITNA	82GRA 01
2.54	0.07		ITNA	84GLA 02	<u>V (ug/g)</u>				
2.62	0.02		TCGS	85AND 01	235	25		ITNA	82GRA 01
2.84	0.18		RTNA	84GLA 11	235	40		WXRF	85GLA 01
2.9	0.7		ICPES	83CRO 01	248	1		ICPES	83CRO 01
<u>Sr (ug/g)</u>					248	5		RTNA	84GLA 11
170	10		ICPES	83CRO 01					
170.3	1		WXRF	84KYL 01					
171	10		WXRF	85GLA 01					
179	14		ICPES	84GLA 02					

TABLE 688-2: INDIVIDUAL DATA FOR NBS SRM 688 (cont.)

Conc	Uncer	Com	Method	Reference	
<u>Y (ug/g)</u>					
14.8	1		WXRF	84KYL 01	
18	4		WXRF	85GLA 01	
19.5	0.1		ICPES	83CRO 01	
<u>Yb (ug/g)</u>					
1.77	0.09		ITNA	84GLA 11	
1.86	0.27		ITNA	82GRA 01	
1.97	0.02		FAA	84GLA 11	
2.06	0.05		ITNA	85GLA 01	
2.14	0.02		ITNA	83BOY 01	
2.2	0.03		ICPES	83CRO 01	
2.36	0.12		RTNA	84GLA 11	
<u>Zn (ug/g)</u>					
73	5		WXRF	85GLA 01	
79	1		ICPES	83CRO 01	
90	1.8		ITNA	83BOY 01	
94			AA	85GAU 04	
<u>Zr (ug/g)</u>					
58.6	8.7		ITNA	82GRA 01	
58.8	1		WXRF	84KYL 01	
60.8	0.3		ITNA	83BOY 01	
62	2		WXRF	85GLA 01	
63	4		ICPES	83CRO 01	

TABLE 694-1: COMPILED DATA FOR NBS SRM 694 WESTERN PHOSPHATE ROCK
(revised 3/1/86)

ELEMENT	UNITS	NBS	
		Mean \pm	SD
Al	%	0.95 \pm	0.05
Ca	%	31.2 \pm	0.3
Cd	ug/g	131 \pm	26
Cr	ug/g	6980	
F	%	3.2 \pm	0.1
Fe	ug/g	5520 \pm	420
K	ug/g	4230 \pm	170
Mg	ug/g	1990 \pm	120
Mn	ug/g	90 \pm	9
Na	ug/g	6380 \pm	300
P	%	13.17 \pm	0.04
Si	%	5.23 \pm	0.19
Ti	ug/g	660	
U	ug/g	141.4 \pm	0.6
V	ug/g	1740 \pm	390
Zn	ug/g	1520	

TABLE 697-1: COMPILED DATA FOR NBS SRM 697 BAUXITE (DOMINICIAN)
(revised 3/1/86)

ELEMENT	UNITS	NBS	
		Mean \pm	SD
Al	%	24.2 \pm	0.1
Ba	ug/g	130	
Ca	ug/g	5100 \pm	210
Ce	ug/g	690	
Co	ug/g	13	
Cr	ug/g	684 \pm	34
Fe	%	14.0 \pm	0.2
Hf	ug/g	14	
K	ug/g	510 \pm	60
LOI	%	22.1	
Mg	ug/g	1100 \pm	120
Mn	ug/g	3200 \pm	230
Na	ug/g	270	
P	ug/g	4200 \pm	260
S	ug/g	520 \pm	120
Sc	ug/g	58	
Si	%	3.18 \pm	0.03
Ti	%	1.51 \pm	0.03
V	ug/g	350 \pm	30
Zn	ug/g	300 \pm	25
Zr	ug/g	480 \pm	50

TABLE 696-1: COMPILED DATA FOR NBS SRM 696 BAUXITE (SURINAM)
(revised 3/1/86)

ELEMENT	UNITS	NBS		CONSENSUS		RANGE	METHOD
		Mean	± SD	Mean	(n)		
Al	%	28.8	± 0.2	28.43	(2)	28.30 - 28.57	ICPES
Ba	ug/g	36		31	(2)	30.46 - 32.26	ICPES
Ca	ug/g	130	± 15	122	(2)	115 - 129	ICPES
Ce	ug/g	41		38	(1)	---	---
Co	ug/g	0.9		---		---	---
Cr	ug/g	320	± 30	318	(2)	314 - 321	ICPES
Fe	%	6.08	± 0.07	6.04	(2)	6.01 - 6.07	ICPES
Hf	ug/g	32		29	(2)	28 - 30	ICPES
K	ug/g	75	± 25	---		---	---
LOI	%	29.9	± 0.2	---		---	---
Mg	ug/g	72	± 18	63.3	(2)	60.30 - 66.33	ICPES
Mn	ug/g	31	± 8	28.2	(2)	27.09 - 29.41	ICPES
Na	ug/g	52		---		---	---
P	ug/g	220	± 30	209	(2)	192 - 227	ICPES
S	ug/g	840	± 120	---		---	---
Sc	ug/g	8		8	(2)	7 - 9	ICPES
Si	%	1.77	± 0.05	1.76	(2)	1.76 - 1.76	ICPES
Ti	%	1.58	± 0.03	1.56	(2)	1.55 - 1.58	ICPES
V	ug/g	400	± 30	398	(2)	398 - 398	ICPES
Zn	ug/g	11	± 6	12.8	(1)	---	ICPES
Zr	ug/g	1040	± 150	1003	(2)	992 - 1014	ICPES

TABLE 696-2: INDIVIDUAL DATA FOR NBS SRM 696 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Al (%)</u>					<u>Mn (ug/g)</u>				
28.3015	0.4232	11	ICPES	83BAR 02	27.09	1.548	11	ICPES	83BAR 02
28.566	0.4232	11	ICPES	83BAR 02	29.412	15.48	11	ICPES	83BAR 02
<u>Ba (ug/g)</u>					<u>P (ug/g)</u>				
30.464	1.792	11	ICPES	83BAR 02	191.84	4.36	11	ICPES	83BAR 02
32.256	2.688	11	ICPES	83BAR 02	226.72	4.36	11	ICPES	83BAR 02
<u>Ca (ug/g)</u>					<u>Sc (ug/g)</u>				
115	1.4	11	ICPES	83BAR 02	7	1	11	ICPES	83BAR 02
129	2	11	ICPES	83BAR 02	9	1	11	ICPES	83BAR 02
<u>Ce (ug/g)</u>					<u>Si (%)</u>				
38	2	11	ICPES	83BAR 02	1.7559	0.0234	11	ICPES	83BAR 02
					1.7559	0.028	11	ICPES	83BAR 02
<u>Cr (ug/g)</u>					<u>Ti (%)</u>				
314.64	6.84	11	ICPES	83BAR 02	1.5514	0.024	11	ICPES	83BAR 02
321.48	6.84	11	ICPES	83BAR 02	1.5754	0.03	11	ICPES	83BAR 02
<u>Fe (%)</u>					<u>V (ug/g)</u>				
6.0114	0.0699	11	ICPES	83BAR 02	397.6	5.6	11	ICPES	83BAR 02
6.0743	0.0629	11	ICPES	83BAR 02	397.6	5.6	11	ICPES	83BAR 02
<u>Hf (ug/g)</u>					<u>Zn (ug/g)</u>				
28	2	11	ICPES	83BAR 02	12.848	0.803	11	ICPES	83BAR 02
30	2	11	ICPES	83BAR 02					
<u>Mg (ug/g)</u>					<u>Zr (ug/g)</u>				
60.3	6.03	11	ICPES	83BAR 02	992	15	11	ICPES	83BAR 02
66.33	1.206	11	ICPES	83BAR 02	1013.8	22.2	11	ICPES	83BAR 02

TABLE 698-1: COMPILED DATA FOR NBS SRM 698 BAUXITE (JAMAICAN)
(revised 3/1/86)

ELEMENT	UNITS	NBS Mean \pm SD	CONSENSUS Mean (n)	RANGE	METHOD
Al	%	25.5 \pm 0.2	25.10 (2)	25.02 - 25.18	ICPES
Ba	ug/g	72	68 (2)	68 - 68	ICPES
Ca	ug/g	4400 \pm 140	4400 (2)	4390 - 4404	ICPES
Ce	ug/g	300	300 (2)	291 - 310	ICPES
Co	ug/g	45	45 (2)	43 - 47	ICPES
Cr	ug/g	550 \pm 40	527 (2)	527 - 527	ICPES
Fe	%	13.7 \pm 0.1	13.6 (2)	13.35 - 13.91	ICPES
Hf	ug/g	15	13 (1)	---	---
K	ug/g	83 \pm 17	---	---	---
LOI	%	27.3	---	---	---
Mg	ug/g	350 \pm 50	332 (2)	332 - 332	ICPES
Mn	ug/g	2900 \pm 230	2875 (2)	2872 - 2879	ICPES
Na	ug/g	110	---	---	---
P	ug/g	1600 \pm 40	1585 (2)	1570 - 1600	ICPES
S	ug/g	880 \pm 120	---	---	---
Sc	ug/g	51	48 (2)	46 - 50	ICPES
Si	ug/g	3200 \pm 140	3180 (2)	3129 - 3232	ICPES
Ti	%	1.42 \pm 0.04	1.40 (2)	1.39 - 1.40	ICPES
V	ug/g	360 \pm 10	347 (2)	342 - 353	ICPES
Zn	ug/g	230 \pm 20	221 (2)	217 - 225	ICPES
Zr	ug/g	450 \pm 70	429.6 (2)	429.2 - 429.9	ICPES

TABLE 698-2: INDIVIDUAL DATA FOR NBS SRM 698 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Al (%)</u>					<u>Mn (ug/g)</u>				
25.0217	0.3703	11	ICPES	83BAR 02	2871.54	46.44	11	ICPES	83BAR 02
25.1804	0.3703	11	ICPES	83BAR 02	2879.28	38.7	11	ICPES	83BAR 02
<u>Ba (ug/g)</u>					<u>P (ug/g)</u>				
68.096	2.688	11	ICPES	83BAR 02	1569.6	21.8	11	ICPES	83BAR 02
68.096	3.584	11	ICPES	83BAR 02	1600.12	26.16	11	ICPES	83BAR 02
<u>Ca (ug/g)</u>					<u>Sc (ug/g)</u>				
4390.1	57.2	11	ICPES	83BAR 02	46	3	11	ICPES	83BAR 02
4404.4	64.35	11	ICPES	83BAR 02	50	2	11	ICPES	83BAR 02
<u>Ce (ug/g)</u>					<u>Si (ug/g)</u>				
291	5	11	ICPES	83BAR 02	3128.9	46.7	11	ICPES	83BAR 02
310	10	11	ICPES	83BAR 02	3231.64	42.03	11	ICPES	83BAR 02
<u>Co (ug/g)</u>					<u>Ti (%)</u>				
43	2	11	ICPES	83BAR 02	1.3897	0.024	11	ICPES	83BAR 02
47	3	11	ICPES	83BAR 02	1.4017	0.018	11	ICPES	83BAR 02
<u>Cr (ug/g)</u>					<u>V (ug/g)</u>				
526.68	6.84	11	ICPES	83BAR 02	341.6	5.6	11	ICPES	83BAR 02
526.68	6.84	11	ICPES	83BAR 02	352.8	5.6	11	ICPES	83BAR 02
<u>Fe (%)</u>					<u>Zn (ug/g)</u>				
13.3509	0.2097	11	ICPES	83BAR 02	216.81	8.03	11	ICPES	83BAR 02
13.9101	0.2796	11	ICPES	83BAR 02	224.84	4.015	11	ICPES	83BAR 02
<u>Hf (ug/g)</u>					<u>Zr (ug/g)</u>				
13	1	11	ICPES	83BAR 02	429.2	7.4	11	ICPES	83BAR 02
					429.94	5.18	11	ICPES	83BAR 02
<u>Mg (ug/g)</u>									
331.65	6.03	11	ICPES	83BAR 02					
331.65	30.15	11	ICPES	83BAR 02					

TABLE 1083-1: COMPILED DATA FOR NBS SRM 1083 WEAR METALS IN LUBRICATING OIL (revised 3/1/86)

ELEMENT	UNITS	NBS Mean
Ag	ng/g	< 50
Al	ug/g	< 0.5
Cd	ng/g	< 40
Cl	ug/g	1.7
Co	ng/g	< 10
Cr	ng/g	< 20
Cu	ng/g	< 500
Fe	ug/g	< 1
Mg	ng/g	< 100
Mn	ng/g	< 5
Mo	ng/g	< 10
Na	ng/g	< 60
Ni	ng/g	< 400
Pb	ng/g	< 40
S	ug/g	980
Si	ug/g	< 1
Sn	ng/g	< 400
Ti	ug/g	< 5
V	ng/g	< 300
Zn	ng/g	< 80

TABLE 1084-1: COMPILED DATA FOR NBS SRM 1084 WEAR METALS IN LUBRICATING OIL (revised 3/1/86)

ELEMENT	UNITS	NBS Mean \pm SD	CONSENSUS Mean \pm SD (n)	MEDIAN	RANGE	METHOD
Ag	ug/g	101	95.7 \pm 1.5 (3)	96	94 - 97	ICPES
Al	ug/g	98 \pm 2	98 \pm 6 (3)	100	92 - 103	ICPES
Cd	ng/g	< 40	---	---	---	---
Cl	ug/g	1.7	---	---	---	---
Co	ng/g	< 10	---	---	---	---
Cr	ug/g	100 \pm 3	101 \pm 1 (3)	101	100 - 102	ICPES
Cu	ug/g	98 \pm 4	99 \pm 2 (3)	99	96 - 101	ICPES
Fe	ug/g	100 \pm 3	98.7 \pm 0.6 (3)	99	98 - 99	ICPES
Mg	ug/g	98 \pm 4	95 \pm 3 (3)	96	92 - 97	ICPES
Mn	ng/g	< 5	---	---	---	---
Mo	ug/g	97 \pm 5	97 \pm 2 (3)	97	94 - 99	ICPES
Na	ng/g	< 60	---	---	---	---
Ni	ug/g	101 \pm 4	97 \pm 4 (3)	98	93 - 101	ICPES
Pb	ug/g	101	98 \pm 2 (3)	97	96 - 100	ICPES
S	ug/g	2237	---	---	---	---
Si	ug/g	102	---	---	---	---
Sn	ug/g	102 \pm 6	---	---	---	---
Ti	ug/g	99 \pm 5	100 \pm 2 (3)	101	98 - 102	ICPES
V	ng/g	< 300	---	---	---	---
Zn	ng/g	< 80	---	---	---	---

TABLE 1084-2: INDIVIDUAL DATA FOR NBS SRM 1084 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ag (ug/g)</u>					<u>Mg (ug/g)</u>				
94	2	11	ICPES	84BAR 03	92	2	11	ICPES	84BAR 03
96	5	11	ICPES	84BAR 03	96	2	11	ICPES	84BAR 03
97	1	11	ICPES	84BAR 03	97	2	11	ICPES	84BAR 03
<u>Al (ug/g)</u>					<u>Mo (ug/g)</u>				
92	5	11	ICPES	84BAR 03	94	3	11	ICPES	84BAR 03
100	3	11	ICPES	84BAR 03	97	3	11	ICPES	84BAR 03
103	7	11	ICPES	84BAR 03	99	4	11	ICPES	84BAR 03
<u>Cr (ug/g)</u>					<u>Ni (ug/g)</u>				
100	1	11	ICPES	84BAR 03	93	3	11	ICPES	84BAR 03
101	3	11	ICPES	84BAR 03	98	4	11	ICPES	84BAR 03
102	5	11	ICPES	84BAR 03	101	5	11	ICPES	84BAR 03
<u>Cu (ug/g)</u>					<u>Pb (ug/g)</u>				
96	3	11	ICPES	84BAR 03	96	4	11	ICPES	84BAR 03
99	4	11	ICPES	84BAR 03	97	2	11	ICPES	84BAR 03
101	3	11	ICPES	84BAR 03	100	3	11	ICPES	84BAR 03
<u>Fe (ug/g)</u>					<u>Ti (ug/g)</u>				
98	4	11	ICPES	84BAR 03	98	2	11	ICPES	84BAR 03
99	2	11	ICPES	84BAR 03	101	7	11	ICPES	84BAR 03
99	2	11	ICPES	84BAR 03	102	2	11	ICPES	84BAR 03

TABLE 1085-1: COMPILED DATA FOR NBS SRM 1085 WEAR METALS IN LUBRICATING OIL (revised 3/1/86)

ELEMENT	UNITS	NBS	CONSENSUS	MEDIAN	RANGE	METHOD
		Mean \pm SD	Mean \pm SD (n)			
Ag	ug/g	291	300 \pm 6 (3)	303	293 - 305	ICPES
Al	ug/g	296 \pm 4	303 \pm 6 (3)	303	297 - 309	ICPES
Cd	ng/g	< 40	---	---	---	---
Cl	ug/g	1.7	---	---	---	---
Co	ng/g	< 10	---	---	---	---
Cr	ug/g	298 \pm 5	302 \pm 8 (3)	304	294 - 309	ICPES
Cu	ug/g	295 \pm 10	302 \pm 2 (3)	302	299 - 304	ICPES
Fe	ug/g	300 \pm 4	303.3 \pm 1.5 (3)	303	302 - 305	ICPES
Mg	ug/g	297 \pm 3	300 \pm 5 (3)	302	295 - 304	ICPES
Mn	ng/g	< 5	---	---	---	---
Mo	ug/g	292 \pm 11	293 \pm 4 (3)	292	290 - 298	ICPES
Na	ng/g	< 60	---	---	---	---
Ni	ug/g	303 \pm 7	300 \pm 10 (3)	303	288 - 308	ICPES
Pb	ug/g	305	300.3 \pm 1.2 (3)	301	299 - 301	ICPES
S	ug/g	4806	---	---	---	---
Si	ug/g	308	---	---	---	---
Sn	ug/g	296 \pm 12	---	---	---	---
Ti	ug/g	300 \pm 4	---	---	---	---
V	ng/g	< 300	---	---	---	---
Zn	ng/g	< 80	---	---	---	---

TABLE 1085-2: INDIVIDUAL DATA FOR NBS SRM 1085 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ag (ug/g)</u>					<u>Fe (ug/g)</u>				
293	5	11	ICPES	84BAR 03	302	5	11	ICPES	84BAR 03
303	7	11	ICPES	84BAR 03	303	5	11	ICPES	84BAR 03
305	5	11	ICPES	84BAR 03	305	10	11	ICPES	84BAR 03
<u>Al (ug/g)</u>					<u>Mg (ug/g)</u>				
297	7	11	ICPES	84BAR 03	295	8	11	ICPES	84BAR 03
303	7	11	ICPES	84BAR 03	302	10	11	ICPES	84BAR 03
309	8	11	ICPES	84BAR 03	304	8	11	ICPES	84BAR 03
<u>Cr (ug/g)</u>					<u>Mo (ug/g)</u>				
294	4	11	ICPES	84BAR 03	290	10	11	ICPES	84BAR 03
304	3	11	ICPES	84BAR 03	292	4	11	ICPES	84BAR 03
309	6	11	ICPES	84BAR 03	298	7	11	ICPES	84BAR 03
<u>Cu (ug/g)</u>					<u>Ni (ug/g)</u>				
299	5	11	ICPES	84BAR 03	288	7	11	ICPES	84BAR 03
302	6	11	ICPES	84BAR 03	303	5	11	ICPES	84BAR 03
304	7	11	ICPES	84BAR 03	308	5	11	ICPES	84BAR 03
					<u>Pb (ug/g)</u>				
					299	10	11	ICPES	84BAR 03
					301	6	11	ICPES	84BAR 03
					301	6	11	ICPES	84BAR 03

TABLE 1549-1: COMPILED COMPOSITION DATA FOR NBS SRM 1549 MILK POWDER (revised 3/1/86)

ELEMENT	UNITS	NBS Mean \pm SD	CONSENSUS Mean (n)	RANGE	METHOD
Ag	ng/g	< 0.3	< 0.3	---	NAA
Al	ug/g	2	< 3	---	NAA
As	ng/g	1.9	1.77 (1)	---	NAA
Br	ug/g	12	11.85 (2)	11.6 - 12.1	NAA
Ca	%	1.3 \pm 0.05	1.263 (2)	1.2 - 1.326	NAA
Cd	ng/g	0.5 \pm 0.2	0.47 (1)	---	NAA
Cl	%	1.09 \pm 0.02	1.085 (1)	---	NAA
Co	ng/g	4.1	4.12 (1)	---	NAA
Cr	ng/g	2.6 \pm 0.7	2.5 (1)	---	NAA
Cs	ng/g	---	17.6 (1)	---	NAA
Cu	ng/g	700 \pm 100	628 (2)	606 - 650	NAA
F	ng/g	200	---	---	---
Fe	ug/g	2.1	2.03 (2)	1.76 - 2.3	NAA
H ₂ O	%	---	3.6 (1)	---	---
Hg	ng/g	0.3 \pm 0.2	0.16 (1)	---	NAA
I	ug/g	3.38 \pm 0.02	3.2 (1)	---	NAA
K	%	1.69 \pm 0.03	1.735 (2)	1.69 - 1.78	NAA
Mg	ug/g	1200 \pm 30	1190 (1)	---	NAA
Mn	ng/g	260 \pm 60	281.5 (2)	233 - 330	NAA
Mo	ng/g	340	332 (2)	322 - 342	NAA
N	%	---	5.61 (1)	---	---
Na	ug/g	4970 \pm 100	4890 (1)	---	NAA
Ni	ng/g	---	240 (1)	---	---
P	%	1.05	---	---	---
Pb	ng/g	19 \pm 3	< 100	---	---
Rb	ug/g	11	12.75 (2)	12.4 - 13.1	NAA
S	ug/g	3510 \pm 50	3514 (1)	---	IDMS
S-32/34	ratio	---	22.624 (1)	---	IDMS
S-33/34	ratio	---	0.1779 (1)	---	IDMS
Sb	ng/g	0.27	0.25 (1)	---	NAA
Sc	ng/g	---	0.94 (1)	---	NAA
Se	ng/g	110 \pm 10	100 (2)	90 - 110	NAA
Si	ug/g	< 50	---	---	---
Sn	ng/g	< 500	1.9 (1)	---	NAA
Sr	ug/g	---	3.69 (1)	---	---
U	ng/g	---	< 1	---	NAA
W	ng/g	---	0.43 (1)	---	NAA
Zn	ug/g	46.1 \pm 2.2	46.75 (2)	46.6 - 46.9	NAA

COMPOUND	CAS #	UNITS	NBS Mean	CONSENSUS Mean (n)
Total Folate	---	ug/g	---	0.64 (1)
Total Pantothenates	---	ug/g	---	45.2 (1)
Thiamine	---	ug/g	---	4.5 (1)
Protein	---	%	---	35.8 (1)
Lactose	---	%	47	---
l-Ascorbic acid	50817	ug/g	53	43.4 (1)
Niacin	59676	ug/g	---	9.8 (1)
Vitamin B6	65236	ug/g	---	4.8 (1)
Riboflavin	83885	ug/g	---	15 (1)

TABLE 1549-2: INDIVIDUAL DATA FOR NBS SRM 1549 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Total Folates (ug/g)</u>					<u>Ca (%)</u>				
0.64			VV	85TAN 01	1.2	0.08		XRF	86GIA 01
					1.326	0.026		ITNA	86GRE 01
<u>Total Pantothenates (ug/g)</u>					<u>Cd (ng/g)</u>				
45.2			VV	85TAN 01	0.47	0.09		RTNA	86GRE 01
<u>Thiamine (ug/g)</u>					<u>Cl (%)</u>				
4.5			VV	85TAN 01	1.085	0.014		ITNA	86GRE 01
<u>Protein (%)</u>					<u>Co (ng/g)</u>				
35.8			VV	85TAN 01	4.12	0.27		ITNA	86GRE 01
<u>L-Ascorbic acid (ug/g)</u>					<u>Cr (ng/g)</u>				
43.4			VV	85TAN 01	<	600	L	XRF	86GIA 01
<u>Niacin (ug/g)</u>					2.5	0.6		RTNA	86GRE 01
9.8			VV	85TAN 01	<u>Cs (ng/g)</u>				
<u>Vitamin B6 (ug/g)</u>					17.6	0.7		ITNA	86GRE 01
4.8			VV	85TAN 01	<u>Cu (ng/g)</u>				
<u>Riboflavin (ug/g)</u>					606	10		RTNA	86GRE 01
15			VV	85TAN 01	650	40		XRF	86GIA 01
<u>Ag (ng/g)</u>					<u>Fe (ug/g)</u>				
<	0.3		RTNA	86GRE 01	1.76	0.13		ITNA	86GRE 01
					2.3	0.16		XRF	86GIA 01
<u>Al (ug/g)</u>					<u>H2O (%)</u>				
<	3		RTNA	86GRE 01	3.6			VV	85TAN 01
<u>As (ng/g)</u>					<u>Hg (ng/g)</u>				
<	50	L	XRF	86GIA 01	<	100	L	XRF	86GIA 01
1.77	0.11		RTNA	86GRE 01	0.16	0.015		RTNA	86GRE 01
<u>Br (ug/g)</u>					<u>I (ug/g)</u>				
11.6	0.04		ITNA	86GRE 01	3.2	0.3		ITNA	86GRE 01
12.1	0.2		XRF	86GIA 01	<u>K (%)</u>				
					1.69	0.03		ITNA	86GRE 01
					1.78	0.2		XRF	86GIA 01

TABLE 1549-2: INDIVIDUAL DATA FOR NBS SRM 1549 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Mg (ug/g)</u>					<u>S-32/34 (ratio)</u>				
1190	30		ITNA	86GRE 01	22.624			IDMS	84KEL 01
<u>Mn (ng/g)</u>					<u>S-33/34 (ratio)</u>				
233	13		ITNA	86GRE 01	0.1779			IDMS	84KEL 01
330	120		XRF	86GIA 01	<u>Sb (ng/g)</u>				
<u>Mo (ng/g)</u>					0.25	0.03		RTNA	86GRE 01
322	17		RTNA	86GRE 01	<u>Sc (ng/g)</u>				
342	10		RTNA	84BYR 01	0.94			ITNA	86GAU 01
<u>N (%)</u>					<u>Se (ng/g)</u>				
5.61			VV	85TAN 01	90	40		XRF	86GIA 01
<u>Na (ug/g)</u>					110	3		ITNA	86GRE 01
4890	60		ITNA	86GRE 01	<u>Sn (ng/g)</u>				
<u>Ni (ng/g)</u>					1.9	0.7		RTNA	86GRE 01
240	60		XRF	86GIA 01	<u>Sr (ug/g)</u>				
<u>Pb (ng/g)</u>					3.69	0.1		XRF	86GIA 01
<	100	L	XRF	86GIA 01	<u>U (ng/g)</u>				
<u>Rb (ug/g)</u>					<	1		DNA	86GAU 01
12.4	0.4		ITNA	86GRE 01	<u>W (ng/g)</u>				
13.1	0.2		XRF	86GIA 01	0.43	0.03		RTNA	84BYR 01
<u>S (ug/g)</u>					<u>Zn (ug/g)</u>				
3514	29		IDMS	84KEL 01	46.6	1.2		ITNA	86GRE 01
					46.9	0.9		XRF	86GIA 01

TABLE 1566-1: COMPILED DATA FOR NBS SRM 1566 OYSTER TISSUE (revised 3/1/86)

ELE	UNITS	NBS		CONSENSUS		MEDIAN	RANGE		AA		NAA		ICPES		OTHER METHODS	
		Mean \pm SD		Mean \pm SD	(n)		Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)	Mean	(n) Method Mean (n) Method
Ag	ug/g	0.89 \pm 0.09		0.94 \pm 0.11	(5)	0.89	0.86 - 1.14	(1)	0.89	(1)	0.95 \pm 0.13	(4)	---	---	---	---
Al	ug/g	---		255 \pm 23	(5)	252	231 - 291	(1)	231	(1)	252 \pm 12	(3)	291	(1)	---	---
As	ug/g	13.4 \pm 1.9		13.0 \pm 1.2	(17)	13	11.1 - 15.5	(7)	13.5 \pm 1.0	(7)	13.1 \pm 1.6	(8)	12.7 \pm 1.5	(3)	---	---
B	ug/g	---		7	(1)	---	---	---	---	---	---	---	---	---	7	(1) TCGS
Ba	ug/g	---		5.18	(1)	---	---	---	---	---	---	---	5.18	(1)	---	---
Br	ug/g	55		53 \pm 6	(6)	51.7	45 - 62.6	---	---	---	53 \pm 6	(6)	---	---	---	---
Ca	ug/g	1500 \pm 200		1400 \pm 120	(14)	1426	1200 - 1549	(3)	---	---	1284 \pm 78	(3)	1510 \pm 20	(7)	1313	(2) XRF 1300 (1) MPOES
Cd	ug/g	3.5 \pm 0.4		3.43 \pm 0.16	(17)	3.43	3.2 - 3.68	(8)	3.46 \pm 0.16	(8)	---	---	3.44 \pm 0.18	(6)	3.49	(1) IDMS 3.27 (2) ASV
Ce	ng/g	---		420	(2)	---	410 - 430	---	---	---	420	(2)	---	---	---	---
Cl	%	1.0		0.99 \pm 0.02	(3)	0.98	0.97 - 1.01	---	---	---	0.99 \pm 0.02	(3)	---	---	---	---
Co	ng/g	400		370 \pm 40	(12)	340	310 - 440	(3)	350 \pm 17	(3)	360 \pm 50	(8)	---	---	440	(1) SSMS
Cr	ng/g	690 \pm 270		650 \pm 80	(11)	650	540 - 750	(1)	680	(1)	660 \pm 90	(4)	660 \pm 60	(3)	645	(2) XRF
Cs	ng/g	---		40.5	(2)	---	31 - 50	---	---	---	40.5	(2)	---	---	---	---
Cu	ug/g	63.0 \pm 3.5		63 \pm 2	(21)	62.9	60 - 69	(5)	64.9 \pm 1.2	(5)	63 \pm 5	(3)	61 \pm 4	(10)	61	(1) XRF 62.8 (2) HPLC
Cu	ug/g	---		---	---	---	---	---	---	---	---	---	---	---	64	(1) ICPMS 67 (1) SSMS
DY	ng/g	---		< 200	---	---	---	---	---	---	< 200	---	---	---	---	---
Eu	ng/g	---		16 \pm 3	(3)	15	13.9 - 20	---	---	---	16 \pm 3	(3)	---	---	---	---
F	ug/g	5.2		5.15	(2)	---	4.9 - 5.4	---	---	---	---	---	---	---	5.15	(2) ISE
Fe	ug/g	195 \pm 34		195 \pm 11	(22)	196	177 - 212.5	(4)	205 \pm 5	(4)	194 \pm 17	(5)	191 \pm 10	(10)	202	(2) HPLC 193 (1) SSMS
H2O-	%	---		5.0	(2)	---	---	---	---	---	---	---	---	---	2.6	(1) GRAV
Hf	ng/g	---		80	(1)	---	---	---	---	---	80	(1)	---	---	---	---
Hg	ng/g	57 \pm 15		56 \pm 4	(6)	56	49 - 60	(1)	54	(1)	54 \pm 5	(3)	60	(2)	---	---
Ho	ng/g	---		< 200	---	---	---	---	---	---	< 200	---	---	---	---	---
I	ug/g	2.8		2.8 \pm 0.3	(7)	2.79	2.34 - 3.21	---	---	---	2.8 \pm 0.3	(7)	---	---	---	---
K	%	0.969 \pm 0.005		0.93 \pm 0.07	(12)	0.9620	0.8 - 1.01	---	---	---	0.88 \pm 0.07	(6)	0.98 \pm 0.02	(4)	0.976	(1) XRF 0.977 (1) FE
La	ng/g	---		370	(2)	---	330 - 410	---	---	---	370	(2)	---	---	---	---
Li	ng/g	---		323	(1)	---	---	(1)	323	(1)	---	---	---	---	---	---
Lu	ng/g	---		< 60	---	---	---	---	---	---	< 60	---	---	---	---	---
Mg	ug/g	1280 \pm 90		1330 \pm 100	(12)	1310	1150 - 1451	(1)	1280	(1)	1310 \pm 130	(3)	1340 \pm 100	(7)	1430	(1) XRF
Mn	ug/g	17.5 \pm 1.2		17.0 \pm 1.2	(22)	17.2	14.5 - 19.3	(4)	17 \pm 2	(4)	16.1 \pm 1.0	(5)	17.3 \pm 0.6	(11)	19.3	(1) ICPMS 14 (1) SSMS
Mo	ng/g	< 200		140 \pm 40	(4)	109	100 - 180	(1)	180	(1)	160	(1)	100	(1)	109	(1) COLOR
N	%	---		6.62	(1)	---	---	---	---	---	---	---	---	---	---	---
Na	ug/g	5100 \pm 300		4950 \pm 220	(10)	4920	4600 - 5300	---	---	---	4780 \pm 350	(6)	5025 \pm 260	(4)	4920	(1) FE
Ni	ug/g	1.03 \pm 0.19		1.01 \pm 0.09	(9)	0.98	0.89 - 1.15	(2)	1.12	(2)	0.98	(1)	0.98 \pm 0.08	(4)	0.89	(1) POL 1.30 (1) SSMS
Ni	ug/g	---		---	---	---	---	---	---	---	---	---	---	---	---	1.05 (1) VOLT

TABLE 1566-1: COMPILED DATA FOR NBS SRM 1566 OYSTER TISSUE (cont.)

ELE	UNITS	NBS		CONSENSUS		MEDIAN	RANGE	AA		NAA		ICPES		OTHER METHODS					
		Mean ±	SD	Mean ±	SD			(n)	Mean ±	SD	(n)	Mean ±	SD	(n)	Mean	(n)	Method	Mean (n)	Method
P	ug/g	8100		7600 ± 500	(14)	7700	6530 - 8200	7800 ± 200	(5)	7266	(1)	7700 ± 400	(5)	7060	(1)	XRF	6480	(2)	COLOR
P	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7800	(1)	CPAA
Pb	ng/g	480 ± 40		480 ± 30	(19)	480	420 - 540	468 ± 24	(13)	---	---	515 ± 19	(4)	505	(2)	ASV	---	---	---
Pd	ng/g	---	---	< 2		---	---	---	---	< 2		---	---	---	---	---	---	---	---
Rb	ug/g	4.45 ± 0.09		4.5 ± 0.5	(7)	4.49	3.8 - 5.35	5.35	(1)	4.5 ± 0.3	(5)	---	---	3.8	(1)	ICPMS	---	---	---
S	ug/g	7600		8700 ± 700	(4)	8700	7977 - 9600	---	---	---	---	9600	(1)	8340	(2)	XRF	8700	(1)	CB
Sb	ng/g	---	---	190 ± 200	(3)	150	9.8 - 400	---	---	79.9	(2)	400	(1)	---	---	---	---	---	---
Sc	ng/g	---	---	76 ± 8	(5)	72	69 - 89	---	---	76 ± 8	(5)	---	---	---	---	---	---	---	---
Se	ug/g	2.1 ± 0.5		2.08 ± 0.20	(19)	2.07	1.7 - 2.42	2.08 ± 0.19	(7)	2.13 ± 0.12	(5)	1.9 ± 0.3	(3)	1.94	(1)	ASV	2.26	(1)	CSV
Se	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2.2	(2)	GC
Si	ug/g	---	---	1100	(1)	---	---	---	---	---	---	1100	(1)	---	---	---	---	---	---
Sm	ng/g	---	---	69.5	(2)	---	63 - 76	---	---	69.5	(2)	---	---	---	---	---	---	---	---
Sr	ug/g	10.36 ± 0.56		10.1 ± 0.7	(8)	9.9	8.58 - 10.99	10.1 ± 0.3	(3)	10.9	(2)	9.5 ± 0.8	(3)	---	---	---	---	---	---
Ta	ng/g	---	---	5.5	(1)	---	---	---	---	5.5	(1)	---	---	---	---	---	---	---	---
Tb	ng/g	---	---	15	(1)	---	---	---	---	15	(1)	---	---	---	---	---	---	---	---
Th	ng/g	100		52	(1)	---	---	---	---	52	(1)	---	---	---	---	---	---	---	---
Ti	ug/g	---	---	7.32	(1)	---	---	---	---	---	---	7.32	(1)	---	---	---	---	---	---
Tl	ng/g	< 5		< 5		---	---	---	---	---	---	< 5		---	---	---	---	---	---
U	ng/g	116 ± 6		121 ± 8	(4)	117	112 - 129	---	---	124 ± 6	(3)	---	---	112	(1)	IDMS	---	---	---
V	ug/g	2.3 ± 0.1		2.7 ± 0.2	(8)	2.67	2.32 - 3.1	---	---	2.8	(2)	2.57	(2)	2.316	(1)	IDMS	2.67	(1)	COLOR
V	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	2.80	(1)	SSMS	2.9	(1)	ICPMS
W	ug/g	---	---	< 1		---	---	---	---	< 1		---	---	---	---	---	---	---	---
Yb	ng/g	---	---	< 500		---	---	---	---	< 500		---	---	---	---	---	---	---	---
Zn	ug/g	852 ± 14		854 ± 24	(21)	851	805 - 887.6	868 ± 10	(4)	840 ± 60	(7)	844 ± 24	(9)	750	(1)	XRF	860	(1)	ICPMS
Zn	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	851	(1)	SSMS

COMPOUND	CAS #	UNITS	NBS	CONSENSUS	
				Mean	(n)
Total Folates	---	ug/g	---	1.2	(1)
Total Pantothenates	---	ug/g	---	10.2	(1)
Thiamine	---	ug/g	---	5.1	(1)
Protein	---	%	---	41.4	(1)
Nicotinic Acid	59676	ug/g	---	101.6	(1)
Vitamin B-6	65236	ug/g	---	1.4	(1)
Riboflavin	83885	ug/g	---	9.8	(1)

TABLE 1566-2: INDIVIDUAL DATA FOR NBS SRM 1566 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Total Folates (ug/g)</u>					<u>As (ug/g) cont.</u>				
1.2			VV	85TAN 01	12.1	1		HAA	85NAR 03
					12.2	1.1		IENA	82GLA 02
<u>Total Pantothenates (ug/g)</u>					12.4			IENA	84GLA 02
					12.9	0.85		ICPES	84SUN 01
10.2			VV	85TAN 01	13	0.6		ITNA	86KRA 01
					13	1.2		ITNA	79KOB 03
<u>Thiamine (ug/g)</u>					13.1	0.3		HAA	83MAH 01
					13.17	0.34		HAA	81UTH 01
5.1			VV	85TAN 01	13.2	0.4		HAA	83MAH 04
					13.4	0.3		HAA	84NAR 01
<u>Protein (%)</u>					13.9	0.52		AA	85SAK 01
					14	3		ICPES	84NAD 01
41.4			VV	85TAN 01	15	3		NAA	85LEP 01
					15.5	0.3	11	HAA	82JON 01
<u>Nicotinic acid (ug/g)</u>					15.87	3.5		ITNA	86CHI 01
101.6			VV	85TAN 01	<u>B (ug/g)</u>				
					7	1		TCGS	82GLA 02
<u>Vitamin B-6 (ug/g)</u>					<u>Ba (ug/g)</u>				
1.4			VV	85TAN 01					
<u>Riboflavin (ug/g)</u>					<	4		NAA	85LEP 01
					5.18	0.24		ICPES	84NAD 01
9.8			VV	85TAN 01	<u>Br (ug/g)</u>				
<u>Ag (ug/g)</u>					45	1.4		ITNA	79KOB 03
0.86	0.09		IENA	86CHI 01	50.57	0.45		ITNA	86CHI 01
0.88	0.05		ITNA	84ALK 01	51.7	7.1		IENA	86CHI 01
0.89	0.02		FAA	85OKA 02	52.9	3.3		IENA	86CHI 01
0.93	0.06		ITNA	86CHI 01	55	17		IENA	84GLA 11
1.14	0.13		ITNA	86KRA 01	62.6	0.4		NAA	85LEP 01
3.6	0.3		ICPMS	85PAR 01	180			EXRF	81PAR 01
<u>Al (ug/g)</u>					<u>Ca (ug/g)</u>				
231	9		FAA	86KRA 02	880	3370	R	AA	80UCH 01
240	7		ITNA	86KRA 02	1200	400		CPXRF	85SIM 01
252	6		ITNA	86KRA 01	1200	400		NAA	85LEP 01
263	8		IENA	85GLA 02	1300			MPOES	85ZHA 01
291	24		ICPES	84NAD 01	1300	100		ICPES	84NAD 01
366	9		HPLC	85BOW 01	1300	200		ITNA	86KRA 01
<u>As (ug/g)</u>					1353	146		RTNA	82MUR 01
					1426	44		WXRF	84ALK 01
9.2	0.6		ICPMS	85PAR 01	1499		6	ICPES	83CHA 01
9.7			ICPES	84MAR 01	1500	100		ICPES	85WHI 02
11.1	1.1		ICPES	83OLI 01	1500	100		ICPES	84SUN 01
11.3	1		RTNA	85GAU 04	1500	100		ICPES	84SUN 01
11.96	0.56		IENA	86CHI 01					

TABLE 1566-2: INDIVIDUAL DATA FOR NBS SRM 1566 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ca (ug/g) cont.</u>					<u>Co (ng/g) cont.</u>				
1510	20	11	ICPES	82JON 01	390	60		IENA	86CHI 01
1530	30	11	ICPES	82JON 01	420	70		IENA	86CHI 01
1549		6	ICPES	83CHA 01	440	30		SSMS	81BER 01
1738	153		ITNA	84ALK 01	440	70		ITNA	86CHI 01
4500			EXRF	81PAR 01	1200	100		ICPES	81BER 01
<u>Cd (ug/g)</u>					<u>Cr (ng/g)</u>				
3.2	0.1		FAA	82SUZ 01	340	90	11	ICPES	82JON 01
3.2	0.15		ICPES	84SUN 01	540	310	11	CPXRF	84SIM 01
3.24	0.29		ASV	82SAT 02	550	60		ITNA	84ALK 01
3.25	0.05	6	ICPES	85OKA 02	600	100		SSMS	81BER 01
3.3	0.3		ASV	82GAJ 01	600	200	11	ICPES	82JON 01
3.31	0.03		AA	85OKA 02	620	30		NAA	85LEP 01
3.4		14	FAA	80CHA 09	650	50		ICPES	84SUN 01
3.4	0.22		FAA	81CHA 01	680	20		FAA	85OKA 02
3.43	0.07	6	ICPES	85OKA 02	700	200		ITNA	79KOB 03
3.49	0.01		IDMS	84BRO 03	720	70		ICPES	84SUN 01
3.5	0.5		AA	84KAN 01	750	100		ITNA	86CHI 01
3.54	0.04	11	ICPES	82JON 01	750	120	D	CPXRF	84SIM 02
3.6		14	FAA	80CHA 09	750	120	11	CPXRF	84SIM 01
3.6	0.1		ICPES	84SUN 01	1100	200		ICPES	81BER 01
3.6	0.1		FAA	85OKA 02	1450	310		ITNA	86KRA 01
3.61	0.03	11	ICPES	82JON 01	<u>Cs (ng/g)</u>				
3.68	0.06		FAA	83DEL 01	31	3		NAA	85LEP 01
4.7	1		ICPES	84NAD 01	50	4		ITNA	84ALK 01
<u>Ce (ng/g)</u>					<u>Cu (ug/g)</u>				
410	180		ITNA	86KRA 01	53		6	ICPES	83CHA 01
430	20		NAA	85LEP 01	55		6	ICPES	83CHA 01
<u>Cl (%)</u>					60	6		ICPES	84NAD 01
0.827	0.007		NAA	85LEP 01	60	6.7		ITNA	84ALK 01
0.97	0.04		IENA	84GLA 11	60.5	4.2	13	HPLC	85BON 01
0.98	0.02		ITNA	86KRA 01	60.7	0.7	6	ICPES	85OKA 02
1.011	0.05		ITNA	84ALK 01	60.9	0.5	6	ICPES	85OKA 02
<u>Co (ng/g)</u>					61			XRF	80SUZ 02
220	30		VOLT	84ADE 02	61	2.1		RTNA	82MUR 01
310	10		ITNA	84ALK 01	61.8	0.9	11	ICPES	82JON 01
317	14		ITNA	86KRA 01	62.6	3.7		ICPES	84SUN 01
340		14	FAA	80CHA 09	62.9	0.5	11	ICPES	82JON 01
340		14	FAA	80CHA 09	63			AA	80UCH 01
340	10		ITNA	86CHI 01	64	2.1		ICPMS	85PAR 01
340	20		ITNA	79KOB 03	64.4	1		AA	85OKA 02
346	6		NAA	85LEP 01	64.5	0.6		ICPES	81BER 01
370	10		FAA	85OKA 02	65		14	FAA	80CHA 09
					65			ICPES	84SUN 01
					65.2	1.5	13	HPLC	85BON 01

TABLE 1566-2: INDIVIDUAL DATA FOR NBS SRM 1566 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Cu (ug/g) cont.</u>					<u>H2O- (%)</u>				
66			FAA	81BER 01					
66		14	FAA	80CHA 09	2.6			GRAV	84NAR 01
67	2		SSMS	81BER 01	2.6		D	GRAV	85MAR 03
69	14		ITNA	86KRA 01	7.3			VV	85TAN 01
128	2		AA	81UCH 01					
189			EXRF	81PAR 01					
<u>Dy (ng/g)</u>					<u>Hf (ng/g)</u>				
<	200		NAA	85LEP 01	80	8		NAA	85LEP 01
<u>Eu (ng/g)</u>					<u>Hg (ng/g)</u>				
13.9	0.7		NAA	85LEP 01	40			CVAA	84GLA 02
15	8		ITNA	86KRA 01	49	7		RTNA	84DRA 01
20	10		ITNA	79KOB 03	54	4		CVAA	86GAU 01
					56	5		RTNA	84DEL 01
<u>F (ug/g)</u>					58	6	7	RTNA	80GAL 02
4.9	0.5		ISE	83KNA 01	60			ICPES	84MAR 01
5.4	1.2		ISE	84GLA 02	60	10		ICPES	84SUN 01
<u>Fe (ug/g)</u>					<u>Ho (ng/g)</u>				
					<	200		NAA	85LEP 01
161	2.5		ICPES	84SUN 01	<u>I (ug/g)</u>				
171	10		ICPES	84NAD 01	2.337	0.074		RTNA	80GVA 01
177			ICPES	84SUN 01	2.5	0.2		IENA	84FAR 01
178	4		ITNA	79KOB 03	2.7	0.7		IENA	84GLA 11
178	32		ITNA	86KRA 01	2.79			NAA	79HEC 01
179		6	ICPES	83CHA 01	3.062	0.128	35	RTNA	81ALL 01
180		6	ICPES	83CHA 01	3.209	0.134		RTNA	81STR 01
190.5	9		ITNA	84ALK 01	3.209	0.134	34	RTNA	81ALL 01
191	5	11	ICPES	82JON 01	<u>K (%)</u>				
192	8		ICPES	81BER 01	0.475			MPOES	85ZHA 01
193	4		SSMS	81BER 01	0.8	0.15		ITNA	86KRA 01
194	9	11	ICPES	82JON 01	0.82	0.07		ITNA	86CHI 01
196	6	11	ICPES	82JON 01	0.86	0.03		IENA	86CHI 01
198		14	FAA	80CHA 09	0.87	0.03		ITNA	79KOB 03
200	4	13	HPLC	85BON 01	0.96	0.03		NAA	85LEP 01
200	5	6	ICPES	85OKA 02	0.962	0.03		ITNA	84ALK 01
201	3	6	ICPES	85OKA 02	0.963	0.031		ICPES	85WHI 02
203	5	13	HPLC	85BON 01	0.9763	0.0301		WXRF	84ALK 01
203	8	11	ICPES	82JON 01	0.977			FE	80UCH 01
204	2		AA	85OKA 02	0.98	0.02	11	ICPES	82JON 01
209			AA	80UCH 01	0.98	0.04	11	ICPES	82JON 01
209		14	FAA	80CHA 09	1.01	0.06		ICPES	84NAD 01
210	4		NAA	85LEP 01	1.89			EXRF	81PAR 01
212.5	37		IENA	86CHI 01					
218.9	9		ITNA	86CHI 01					
576			EXRF	81PAR 01					

TABLE 1566-2: INDIVIDUAL DATA FOR NBS SRM 1566 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>La (ng/g)</u>					<u>Mn (ug/g) cont.</u>				
330	110		ITNA	86KRA 01	18.6	0.3		AA	85OKA 02
410	20		NAA	85LEP 01	19			AA	80UCH 01
					19.3	1.1		ICPMS	85PAR 01
					21	3		NAA	85LEP 01
					49			EXRF	81PAR 01
<u>Li (ng/g)</u>					<u>Mo (ng/g)</u>				
323	6		AA	85EVA 01					
<u>Lu (ng/g)</u>									
					<	70	L	ICPES	82JON 01
<	60		NAA	85LEP 01	100	100	11	ICPES	82JON 01
					109	72		COLOR	85EVA 02
<u>Mg (ug/g)</u>					160	40		IENA	86CHI 01
					180	20		FAA	84GOH 01
980	30		ICPES	84NAD 01	<u>N (%)</u>				
1150			ICPES	84SUN 01					
1200	100		ITNA	86KRA 01	6.62			VV	85TAN 01
1270		6	ICPES	83CHA 01	<u>Na (ug/g)</u>				
1277	72		RTNA	82MUR 01					
1280			AA	80UCH 01	4200	300		IENA	86CHI 01
1310	20		ICPES	85WHI 02	4600	240		ITNA	79KOB 03
1380	100		ICPES	84SUN 01	4700	200		ITNA	86CHI 01
1410	20	11	ICPES	82JON 01	4800		6	ICPES	83CHA 01
1430		6	ICPES	83CHA 01	4800		6	ICPES	83CHA 01
1430	38		WXRF	84ALK 01	4920			FE	80UCH 01
1430	40	11	ICPES	82JON 01	5030	40		ITNA	86KRA 01
1451	213		ITNA	84ALK 01	5070	20		NAA	85LEP 01
<u>Mn (ug/g)</u>					5082	258		ITNA	84ALK 01
					5200	400		ICPES	84NAD 01
3			XRF	80SUZ 02	5300	100		ICPES	85WHI 02
14	2		SSMS	81BER 01	9750			MPOES	85ZHA 01
14.5			FAA	81BER 01	<u>Ni (ug/g)</u>				
15	1.2		ITNA	79KOB 03					
15	2.4		ITNA	84ALK 01	0.89			POL	85UTO 01
15.3	0.15		ICPES	84SUN 01	0.92	0.04	11	ICPES	82JON 01
16.1	1.1		ICPES	84NAD 01	0.95	0.04		ICPES	84SUN 01
16.57	0.97		IENA	86CHI 01	0.97	0.09	11	ICPES	82JON 01
16.7		6	ICPES	83CHA 01	0.98	0.1		IENA	86CHI 01
16.7		6	ICPES	83CHA 01	1.05	0.02		VOLT	84ADE 02
17	1		ITNA	86KRA 01	1.1			FAA	81BER 01
17.1	0.4		RTNA	82MUR 01	1.1	0.17		ICPES	84SUN 01
17.2	0.2	11	ICPES	82JON 01	1.15	0.02		FAA	85OKA 02
17.2	0.6		FAA	81CHA 01	1.3	0.1		SSMS	81BER 01
17.3	0.3	6	ICPES	85OKA 02	1.6	0.3		ICPES	81BER 01
17.4	0.6	11	ICPES	82JON 01	1.6	0.5		NAA	85LEP 01
17.4	0.6	6	ICPES	85OKA 02					
17.5	0.7		ICPES	81BER 01					
17.8	0.9	11	ICPES	82JON 01					
17.9	0.42		ICPES	84SUN 01					
17.9	1.3		ICPES	85WHI 02					

TABLE 1566-2: INDIVIDUAL DATA FOR NBS SRM 1566 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>P (ug/g)</u>					<u>Rb (ug/g)</u>				
5600	200		ICPES	84NAD 01	3.8	0.5		ICPMS	85PAR 01
6420	150	11	COLOR	84LIN 01	4.2	0.6		ITNA	86KRA 01
6530	120	11	COLOR	84LIN 01	4.27	0.19		ITNA	86CHI 01
7000	100		ICPES	84SUN 01	4.49	0.05		ITNA	84ALK 01
7057	231		WXRF	84ALK 01	4.6	0.1		NAA	85LEP 01
7266	1144		IENA	84ALK 01	5.04	0.1		IENA	86CHI 01
7600	400	6	FAA	81LAN 01	5.35	0.32		AA	85EVA 01
7700	100		ICPES	85WHI 02	20			EXRF	81PAR 01
7700	400	14	FAA	84LIN 01					
7800	100		CPAA	83MAS 02					
7800	200	11	ICPES	82JON 01					
7800	300	6	FAA	81LAN 01	7977	248		WXRF	84ALK 01
7800	500	14	FAA	84LIN 01	8700	200		WXRF	86BOW 01
7900	100	11	ICPES	82JON 01	8700	200		CB	86BOW 01
8100	900	14	FAA	84LIN 01	9600	200		ICPES	85WHI 02
8200			ICPES	84SUN 01					
<u>Pb (ng/g)</u>					<u>Sb (ng/g)</u>				
420	20	14	FAA	84LUN 01	9.8	1.2		NAA	85LEP 01
440	40		FAA	82RAI 01	150	40		ITNA	79KOB 03
450		6	FAA	81HIN 01	400	300		ICPES	83OLI 01
450		6	FAA	82KOI 01					
460	50	14	FAA	84LUN 01					
460	60	14	FAA	84LUN 01					
470	10		FAA	81CHA 01					
480		6	FAA	82KOI 01					
480		6	FAA	81HIN 01					
480	10		FAA	82ATS 02					
480	20		FAA	85OKA 02					
500		14	FAA	80CHA 09					
500	20		ASV	82GAJ 01					
500	200	11	ICPES	82JON 01					
500	300	11	ICPES	82JON 01					
510		14	FAA	80CHA 09					
510	60		ASV	82SAT 02					
520	30		ICPES	84SUN 01					
540	10		ICPES	84SUN 01					
560	40	14	FAA	84LUN 01					
2600	200		ICPMS	85PAR 01					
<u>Pd (ng/g)</u>					<u>Se (ug/g)</u>				
<	2		RTNA	85BEM 01	1.6	0.4		NAA	85LEP 01
					1.7	0.14		ICPES	84SUN 01
					1.7	0.2		ICPES	83OLI 01
					1.8	0.2		HAA	82MAY 01
					1.94	0.07		ASV	84ADE 01
					2	0.2		HAA	84NAR 01
					2	0.2		HAA	85NAR 03
					2.02	0.9		ITNA	84ALK 01
					2.04	0.04		IENA	86CHI 01
					2.05	0.05		HAA	82JUL 01
					2.07	0.03		FAA	82JUL 01
					2.1	0.2		ITNA	84LAN 01
					2.18	0.25	11	GC	84SIU 01
					2.21	0.08		ITNA	86CHI 01
					2.22	0.03	11	HAA	82JON 01

TABLE 1566-2: INDIVIDUAL DATA FOR NBS SRM 1566 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Se (ug/g) cont.</u>					<u>Ti (ug/g)</u>				
2.23	0.26	11	GC	84SIU 01	<	200		NAA	85LEP 01
2.26	0.24		CSV	83AHM 02	7.32	0.91		ICPES	84NAD 01
2.3			ICPES	84MAR 01					
2.3	0.3		ITNA	86KRA 01					
2.42	0.08	11	HAA	82JON 01					
2.6	0.3		HAA	85CUT 01					
<u>Se(IV) (ug/g)</u>					<u>U (ng/g)</u>				
<	0.01		HAA	85CUT 01	112	1		IDMS	83KEL 01
					117	8		DNA	85GAU 04
<u>Se(VI) (ug/g)</u>					126			DNA	84GLA 02
<	0.01		HAA	85CUT 01	129			DNA	84GLA 11
<u>Si (ug/g)</u>					<u>V (ug/g)</u>				
1100	100		ICPES	84NAD 01	1.64	0.05		RTNA	82MUR 01
					2.316	0.006		IDMS	85FAS 02
					2.44	0.06	11	ICPES	82JON 01
<u>Sm (ng/g)</u>					2.5	0.2		ITNA	86KRA 01
63	15		ITNA	86KRA 01	2.67			COLOR	85EVA 02
76	7		NAA	85LEP 01	2.7	0.4		ICPES	81BER 01
					2.8	0.3		SSMS	81BER 01
					2.9	0.4		ICPMS	85PAR 01
<u>Sr (ug/g)</u>					3.1	0.6		NAA	85LEP 01
8.58	0.42		ICPES	84NAD 01	<u>W (ug/g)</u>				
9.87	0.35	6	ICPES	85OKA 02	<	1		NAA	85LEP 01
9.9	0.68		AA	85EVA 01					
9.9	1.1		FAA	82SUZ 03					
9.96	0.2	6	ICPES	85OKA 02	<u>Yb (ng/g)</u>				
10.5	0.3		AA	85OKA 02	<	500		NAA	85LEP 01
10.8	0.6		IENA	85GAU 04					
10.99	0.76		IENA	86CHI 01					
92			EXRF	81PAR 01	<u>Zn (ug/g)</u>				
<u>Ta (ng/g)</u>					716	30		ICPES	84NAD 01
5.5	0.6		NAA	85LEP 01	730	10		NAA	85LEP 01
<u>Tb (ng/g)</u>					746	2.2		ICPES	84SUN 01
15	2		NAA	85LEP 01	750			XRF	80SUZ 02
					805	7	6	ICPES	85OKA 02
<u>Th (ng/g)</u>					805	36		ITNA	84ALK 01
52	2		NAA	85LEP 01	822	4	6	ICPES	85OKA 02
					824	9		ICPES	85WHI 02
					843	12	11	ICPES	82JON 01
					848	5.7		ICPES	84SUN 01
					848.5	4.5		IENA	86CHI 01
					850	14		ITNA	86KRA 01

TABLE 1566-2: INDIVIDUAL DATA FOR NBS SRM 1566 (cont.)

Conc	Uncer	Con	Method	Reference	
<u>Zn (ug/g) cont.</u>					
851	37		SSMS	81BER 01	
851	43		ICPES	81BER 01	
859	9	11	ICPES	82JON 01	
860			AA	80UCH 01	
860	6		AA	85OKA 02	
860	50		ICPMS	85PAR 01	
869	8	11	ICPES	82JON 01	
870	35		ITNA	79KOB 03	
874		14	FAA	80CHA 09	
878	15	11	ICPES	82JON 01	
880		14	FAA	80CHA 09	
884.6	17		ITNA	86CHI 01	
887.6	10		IENA	86CHI 01	
2953			EXRF	81PAR 01	

TABLE 1567-1: COMPILED DATA FOR NBS SRM 1567 WHEAT FLOUR (revised 3/1/86)

ELE	UNITS	NBS		CONSENSUS		MEDIAN	RANGE		AA		NAA		ICPES		OTHER METHODS	
		Mean \pm SD	(n)	Mean \pm SD	(n)		Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)	Mean	(n) Method
Al	ug/g	---	(1)	17	---	---	---	---	---	---	---	---	---	---	17	(1) SIMS
As	ng/g	6	(10)	5.7 \pm 0.3	(10)	5.6	5.4 - 6.3	(1)	6	(1)	5.52 \pm 0.12	(7)	6	(1)	---	---
B	ug/g	---	(1)	1.5	---	---	---	---	---	---	---	---	---	---	1.5	(1) TCGS
Be	ng/g	---	---	< 30	---	---	---	---	---	---	---	< 30	---	---	---	---
Bi	ng/g	---	---	< 8	---	---	---	---	---	---	---	< 8	---	---	---	---
Br	ug/g	9	(7)	8.4 \pm 1.2	(7)	8.5	6.3 - 9.9	---	---	---	8.7 \pm 0.9	(5)	---	---	7.4	(2) XRF
Ca	ug/g	190 \pm 10	(17)	190 \pm 11	(17)	195	170 - 208	(6)	185 \pm 10	(6)	---	---	197 \pm 4	(8)	208	(1) FAE
Ca	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	174	(1) XRF
Cd	ng/g	32 \pm 7	(10)	30 \pm 5	(10)	30	20 - 40	(1)	30	(1)	30.8	(2)	35 \pm 8	(6)	24.5	(2) ASV
Cl	ug/g	---	(4)	591 \pm 20	(4)	580	570 - 615	---	---	---	591 \pm 20	(4)	---	---	---	---
Co	ng/g	---	(1)	21	---	---	---	---	---	---	21	(1)	---	---	---	---
Cr	ng/g	---	(4)	290 \pm 80	(4)	240	225 - 400	(2)	232	(2)	---	---	350	(2)	---	---
Cs	ng/g	---	(1)	3.5	---	---	---	---	---	---	3.5	(1)	---	---	---	---
Cu	ug/g	2.0 \pm 0.3	(20)	1.96 \pm 0.10	(20)	2	1.78 - 2.08	(2)	2	(2)	1.93 \pm 0.10	(4)	2.04 \pm 0.08	(10)	2.035	(1) IDMS
Cu	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	1.80	(1) ASV
Cu	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	1.84	(2) XRF
F	ng/g	---	(1)	40	---	---	---	---	---	---	---	---	---	---	40	(1) ISE
Fe	ug/g	18.3 \pm 1.0	(18)	17.8 \pm 1.2	(18)	17.7	15.2 - 19.6	(3)	15.9 \pm 1.0	(3)	17.2	(1)	18.4 \pm 0.9	(12)	15.2	(1) FAE
Fe	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	17.3	(2) XRF
Ge	ng/g	---	---	< 20	---	---	---	---	---	---	---	---	---	---	---	---
H2O-	%	---	(2)	10.6	---	---	9.8 - 11.5	---	---	---	---	---	---	---	---	---
Hg	ng/g	1.0 \pm 0.8	(4)	1.08 \pm 0.10	(4)	1	1.0 - 1.22	---	---	---	1.08 \pm 0.10	(4)	---	---	---	---
I	ng/g	---	(1)	1.97	---	---	---	---	---	---	1.97	(1)	---	---	---	---
K	ug/g	1360 \pm 40	(12)	1300 \pm 90	(12)	1310	1130 - 1500	(3)	1190 \pm 110	(3)	1392	(1)	1316 \pm 100	(8)	1220	(1) XRF
La	ng/g	---	(1)	1.8	---	---	---	---	---	---	1.8	(1)	---	---	---	---
Li	ng/g	---	(1)	41.4	---	---	---	(1)	41.4	(1)	---	---	---	---	---	---
Mg	ug/g	---	(10)	400 \pm 21	(10)	398	370 - 429	(2)	376	(2)	---	---	406 \pm 18	(8)	---	---
Mn	ug/g	8.5 \pm 0.5	(21)	8.6 \pm 0.6	(21)	8.55	7.2 - 9.9	(3)	9.1 \pm 1.0	(3)	8.5 \pm 0.2	(3)	8.4 \pm 0.2	(11)	6.7	(1) AE-AF
Mn	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	8.70	(2) XRF
Mo	ng/g	400	(8)	420 \pm 30	(8)	420	380 - 470	---	---	---	445	(2)	402 \pm 18	(5)	430	(1) COLOR

TABLE 1567-1: COMPILED DATA FOR NBS SRM 1567 WHEAT FLOUR (cont.)

ELE	UNITS	NBS Mean \pm SD	CONSENSUS Mean \pm SD	MEDIAN	RANGE	AA		NAA		ICPES		OTHER METHODS	
						Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n) Method
N	%	---	2.2	---	---	---	---	---	---	---	---	---	---
Na	ug/g	8.0 \pm 1.5	11.1 \pm 1.8	10.4	9 - 13	---	---	11.8 \pm 1.3	(3)	---	---	9	(1) FAE
Ni	ng/g	180	190 \pm 30	175	160 - 230	175	(1)	---	---	180	(2)	230	(1) POL
Ni	ng/g	---	---	---	---	---	---	---	---	---	---	110	(1) XRF
P	ug/g	---	1390 \pm 30	1390	1350 - 1450	---	---	---	---	1390 \pm 30	(7)	---	---
Pb	ug/g	0.02 \pm 0.01	0.018	---	---	---	---	---	---	---	---	0.018	(1) ASV
Rb	ug/g	1	0.95 \pm 0.03	0.94	0.93 - 0.99	0.93	(1)	0.99	(1)	---	---	0.94	(1) XRF
S	ug/g	---	1810 \pm 110	1810	1623 - 1980	---	---	---	---	1860	(1)	1810 \pm 130	(5) CB
S	ug/g	---	---	---	---	---	---	---	---	---	---	1780	(1) XRF
Sb	ng/g	---	19.85	---	1.7 - 38	---	---	19.8	(2)	---	---	---	---
Sc	ng/g	---	0.58	---	0.5 - 0.67	---	---	0.58	(2)	---	---	---	---
Se	ug/g	1.1 \pm 0.2	1.03 \pm 0.08	1.03	0.87 - 1.17	0.98 \pm 0.06	(14)	1.11 \pm 0.05	(11)	0.97 \pm 0.14	(4)	1	(1) CSV
Se	ug/g	---	---	---	---	---	---	---	---	---	---	0.95	(1) GC-MS
Se	ug/g	---	---	---	---	---	---	---	---	---	---	1.03 \pm 0.08	(5) XRF
Sm	ng/g	---	0.82	---	---	---	---	0.82	(1)	---	---	---	---
Sr	ug/g	---	0.97 \pm 0.11	0.97	0.82 - 1.08	0.97	(1)	---	---	1.05	(2)	0.82	(1) SR
Te	ng/g	< 2	---	---	---	---	---	---	---	---	---	---	---
Tl	ng/g	---	2.7 \pm 0.6	3.0	2.0 - 3.0	---	---	---	---	---	---	2.7 \pm 0.6	(3) ASV
U	ng/g	---	0.95	---	---	---	---	0.95	(1)	---	---	---	---
V	ng/g	---	11.25	---	11.2 - 11.3	---	---	11.2	(1)	---	---	11.3	(1) COLOR
Zn	ug/g	10.6 \pm 1.0	10.6 \pm 0.4	10.6	9.9 - 11.3	9.9	(1)	10.9	(1)	10.7 \pm 0.4	(14)	10.3	(1) XRF

COMPOUND	CAS #	UNITS	NBS	CONSENSUS	
				Mean	(n)
Total Folate	---	ug/g	---	0.22	(1)
Total Pantothenates	---	ug/g	---	3.1	(1)
Thiamine	---	ug/g	---	2.5	(1)
Protein	---	%	---	12.4	(1)
Nicotinic Acid	59676	ug/g	---	14.7	(1)
Vitamin B-6	65236	ug/g	---	0.72	(1)
Riboflavin	83885	ug/g	---	0.56	(1)

TABLE 1567-2: INDIVIDUAL DATA FOR NBS SRM 1567 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Total Folates (ug/g)</u>					<u>Be (ng/g)</u>				
0.22			VV	85TAN 01	<	30	L	ICPES	82KUE 01
<u>Total Pantothenates (ug/g)</u>					<u>Bi (ng/g)</u>				
3.1			VV	85TAN 01	<	8	L	ICPES	82HAH 01
<u>Thiamine (ug/g)</u>					<u>Br (ug/g)</u>				
2.5			VV	85TAN 01	6.3	0.4		CPXRF	84BIS 01
<u>Protein (%)</u>					7.6	0.7		IENA	84GLA 11
12.4			VV	85TAN 01	8.3			ITNA	85GAU 04
<u>Nicotinic acid (ug/g)</u>					8.5	1.4		XRF	86GIA 01
14.7			VV	85TAN 01	8.6			IENA	85GAU 04
<u>Vitamin B-6 (ug/g)</u>					9.3			ITNA	86GAU 01
0.72			VV	85TAN 01	9.9	1.5		ITNA	78GIL 01
<u>Riboflavin (ug/g)</u>					<u>Ca (ug/g)</u>				
0.56			VV	85TAN 01	110	4		CPXRF	84BIS 01
<u>Al (ug/g)</u>					170	20		ICPES	85WHI 02
17			SIMS	83RAM 01	173		38	AA	81YAS 01
<u>As (ng/g)</u>					174	10		XRF	86GIA 01
<	30	L	XRF	86GIA 01	179		38	AA	81YAS 01
5.4	0.5		RTNA	78GIL 01	181		38	AA	81YAS 01
5.4	0.5	7	RTNA	77GIL 03	183		38	AA	81YAS 01
5.4	0.5	7	RTNA	80GAL 02	193			ICPES	81WOL 01
5.6	1	7	RTNA	77GIL 03	194	6	11	ICPES	82JON 01
5.6	1	7	RTNA	80GAL 02	195	2	6	ICPES	82KUE 01
5.6	1		RTNA	84DEL 01	195	3	6	ICPES	82KUE 01
5.7			RTNA	85TIA 01	196	2	6	ICPES	82KUE 01
6	0.3		HAA	85YAM 01	197		38	AA	81YAS 01
6	1	H	ICPES	82HAH 01	198	5	1	ICPES	81WOL 02
6.3	0.4		RTNA	84BYR 02	199		38	AA	81YAS 01
30	10		COLOR	77BUR 01	199	4	11	ICPES	82JON 01
<u>B (ug/g)</u>					204		1	ICPES	81WOL 02
1.5			TCGS	82GLA 02	208	34		FAE	83MAR 04
					217	9	12	FAA	85CAR 02
					<u>Cd (ng/g)</u>				
					20			ASV	82GAJ 01
					29	4		ASV	82SAT 02
					30	1	7	RTNA	80GAL 02
					30	10		FAA	80SCH 08
					30	20	6	ICPES	82KUE 01
					30	20	6	ICPES	82KUE 01
					30	20	6	ICPES	82KUE 01
					31.7	1		RTNA	84BYR 02
					32	3		ICPES	83SCH 04
					40	10	11	ICPES	82JON 01
					50	30	11	ICPES	82JON 01

TABLE 1567-2: INDIVIDUAL DATA FOR NBS SRM 1567 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Cl (ug/g)</u>					<u>Cu (ug/g) cont.</u>				
570	50		IENA	84GLA 11	2.2	0.1		ICPES	83SCH 04
580	30		ITNA	85GAU 04	2.6	0.2		FAE	83MAR 04
600	30		ITNA	84GLA 11	2.6	1	12	FAA	85CAR 02
615			ITNA	86GAU 01					
<u>Co (ng/g)</u>					<u>F (ng/g)</u>				
21	4		ITNA	78GIL 01	<	200	L	ISE	84GLA 02
1970	280		RTNA	84BYR 02	40	20		ISE	83KNA 01
<u>Cr (ng/g)</u>					<u>Fe (ug/g)</u>				
<	250	L	ICPES	82KUE 01	11.5	6.1	12	FAE	83MAR 04
<	250	L	ICPES	82KUE 01	14.8	1.2	2	FAA	84MIL 01
<	250	L	ICPES	82KUE 01	15.2	0.5	12	FAE	83MAR 04
<	300	L	XRF	86GIA 01	16.2	0.5	2	FAA	84MIL 01
225	100		FAA	85CAR 01	16.7	3.8	12	FAA	85CAR 02
240	10		FAA	83CAR 02	17	1	11	ICPES	82JON 01
300	100	11	ICPES	82JON 01	17.1	0.8	11	ICPES	82JON 01
400	200	11	ICPES	82JON 01	17.1	4.8		XRF	86GIA 01
760	160		FAE	83MAR 04	17.2	0.6		ITNA	78GIL 01
<u>Cs (ng/g)</u>					17.5	1.2		CPXRF	84BIS 01
<	200	L	ITNA	82GLA 02	17.7	0.7	6	ICPES	82KUE 01
3.5			ITNA	86GAU 01	17.9	0.8	11	ICPES	82JON 01
<u>Cu (ug/g)</u>					18	1	11	ICPES	82JON 01
1.6	0.3	12	FAA	85CAR 02	18.4	0.8	1	ICPES	81WOL 02
1.78			RTNA	85TIA 01	18.4	1	6	ICPES	82KUE 01
1.8			ASV	83HOL 01	18.6	1.2		ICPES	80SCH 08
1.8	0.1		CPXRF	84BIS 01	18.7	2.1	6	ICPES	82KUE 01
1.8	0.2	11	ICPES	82JON 01	19.3	1.1		ICPES	81KNA 01
1.88	0.12		XRF	86GIA 01	19.6		1	ICPES	81WOL 02
1.9	0.2	11	ICPES	82JON 01	19.6			ICPES	81WOL 01
1.95	0.02		RTNA	84BYR 02	23.6	3.9	12	FAA	85CAR 02
2.00	0.01	6	ICPES	82KUE 01	<u>Ge (ng/g)</u>				
2.0	0.1		ICPES	81KNA 01	<	20	L	ICPES	82HAH 01
2.0	0.2	7	RTNA	80GAL 02	<u>H2O (%)</u>				
2.0	0.2		RTNA	78GIL 01	9.8			VV	85TAN 01
2.0	0.2	2	FAA	84MIL 01	<u>H2O- (%)</u>				
2.0	0.3		ICPES	80SCH 08	11.5			GRAV	84NAR 01
2.0	0.6	2	FAA	84MIL 01	11.5		D	GRAV	85NAR 03
2.02	0.08	1	ICPES	81WOL 02					
2.035	0.007		IDMS	84BRO 03					
2.04			ICPES	81WOL 01					
2.06	0.03	6	ICPES	82KUE 01					
2.06	0.04	6	ICPES	82KUE 01					
2.08		1	ICPES	81WOL 02					

TABLE 1567-2: INDIVIDUAL DATA FOR NBS SRM 1567 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Hg (ng/g)</u>					<u>Mn (ug/g)</u>				
<	60	L	XRF	86GIA 01	5.7	0.8	12	FAA	85CAR 02
1	0.3	7	RTNA	80GAL 02	6.7	1.2		AE+AF	82GOL 01
1	0.3		RTNA	78GIL 01	7.2	1		ICPES	85WHI 02
1.08	0.15		RTNA	84DEL 01	7.9	0.2	2	FAA	84MIL 01
1.22	0.16		RTNA	84BYR 02	8	0.4	11	ICPES	82JON 01
					8.2	0.3	11	ICPES	82JON 01
<u>I (ng/g)</u>					8.2	1.8		XRF	86GIA 01
1.97	0.28		RTNA	84BYR 02	8.3			ICPES	81WOL 01
9	5		IENA	84GLA 11	8.3	0.03		RTNA	84BYR 02
					8.3	0.2		ICPES	80SCH 08
<u>K (ug/g)</u>					8.3	0.2	11	ICPES	82JON 01
100	20		FAE	83MAR 04	8.55	0.15	6	ICPES	82KUE 01
1061	114	12	FAA	85CAR 02	8.58	0.16	6	ICPES	82KUE 01
1130	190		ICPES	85WHI 02	8.6			ITNA	85GAU 04
1220	130		XRF	86GIA 01	8.6	0.4		ITNA	78GIL 01
1240	30	2	FAA	84MIL 01	8.63	0.38	1	ICPES	81WOL 02
1260	30	2	FAA	84MIL 01	8.67	0.12	6	ICPES	82KUE 01
1300	50	11	ICPES	82JON 01	8.7		1	ICPES	81WOL 02
1310	40	11	ICPES	82JON 01	8.8	0.5		ICPES	83SCH 04
1320	10	6	ICPES	82KUE 01	9.2	1.4		CPXRF	84BIS 01
1320	10	6	ICPES	82KUE 01	9.6	3.1	12	FAA	85CAR 02
1320	60	1	ICPES	81WOL 02	9.7	0.4	2	FAA	84MIL 01
1330	20	6	ICPES	82KUE 01	9.9	0.5		ICPES	81KNA 01
1392	37		ITNA	78GIL 01	<u>Mo (ng/g)</u>				
1500		1	ICPES	81WOL 02	310			RTNA	85TIA 01
1583	34		CPXRF	84BIS 01	380	30	6	ICPES	82KUE 01
<u>La (ng/g)</u>					390	90	11	ICPES	82JON 01
1.8	0.3		RTNA	86TSU 01	400	40	6	ICPES	82KUE 01
					420	20		RTNA	84BYR 02
<u>Li (ng/g)</u>					420	40	6	ICPES	82KUE 01
41.4	8		AA	85EVA 01	420	70	11	ICPES	82JON 01
					430	63		COLOR	85EVA 02
<u>Mg (ug/g)</u>					470	70		RTNA	84MOK 02
370	20		ICPES	85WHI 02	<u>N (%)</u>				
373	11	2	FAA	84MIL 01	2.2			VV	85TAN 01
378	8	2	FAA	84MIL 01	<u>Na (ug/g)</u>				
397	14	1	ICPES	81WOL 02	<	20		ICPES	85WHI 02
398	10	6	ICPES	82KUE 01	9	0.8		FAE	83MAR 04
406	3	6	ICPES	82KUE 01	10.4	2.5		ITNA	78GIL 01
408		1	ICPES	81WOL 02	12			ITNA	84GLA 11
419	4	6	ICPES	82KUE 01	13	3		ITNA	85GAU 04
420	10	11	ICPES	82JON 01					
429	9	11	ICPES	82JON 01					
466	5		SIMS	83RAM 01					

TABLE 1567-2: INDIVIDUAL DATA FOR NBS SRM 1567 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ni (ng/g)</u>					<u>Sb (ng/g)</u>				
<	500	L	ICPES	82KUE 01	<	2	L	ICPES	82HAH 01
<	500	L	ICPES	82KUE 01	1.7	0.08		RTNA	84BYR 02
<	500	L	ICPES	82KUE 01	38	1		RTNA	78GIL 01
110	60		XRF	86GIA 01	<u>Sc (ng/g)</u>				
160	40	11	ICPES	82JON 01	0.5			ITNA	84GLA 11
175			FAA	85LOW 01	0.67			ITNA	86GAU 01
200	40	11	ICPES	82JON 01	<u>Se (ug/g)</u>				
230			POL	83HOL 01	0.7			FAA	81MEY 01
1500	100		CPXRF	84BIS 01	0.76	0.08	11	HAA	82JON 01
<u>P (ug/g)</u>					0.82	0.08		ICPES	81WOL 01
150			ICPES	85WHI 02	0.87			HAA	81HAH 01
1350	20	6	ICPES	82KUE 01	0.87	0.06	H	ICPES	82HAH 01
1370	10	6	ICPES	82KUE 01	0.901	0.051		HAA	80RAP 02
1370	50	11	ICPES	82JON 01	0.91	0.03	11	HAA	82JON 01
1390	50	1	ICPES	81WOL 02	0.92	0.06		XRF	86GIA 01
1400	10	6	ICPES	82KUE 01	0.94	0.08		HAA	83KOL 01
1420	30	11	ICPES	82JON 01	0.95	0.04		GC-MS	81REA 02
1450		1	ICPES	81WOL 02	0.96	0.08		HAA	81MEY 01
<u>Pb (ug/g)</u>					0.98		11	HAA	85PIW 01
<	0.02	L	ASV	82GAJ 01	1			CSV	81HAN 01
<	0.1	L	ICPES	82JON 01	1	0.1		HAA	85YAM 01
<	0.1	L	ICPES	82JON 01	1	0.1		HAA	85NAR 03
<	3.8	L	ICPES	82KUE 01	1	0.1		HAA	80VIJ 01
<	3.8	L	ICPES	82KUE 01	1	0.1	11	XRF	80RAP 01
<	3.8	L	ICPES	82KUE 01	1	0.2		HAA	85NAR 01
<	100	L	XRF	86GIA 01	1	0.2		HAA	81REA 01
0.018	0.003		ASV	82SAT 02	1.03	0.04		HAA	81HAN 01
<u>Rb (ug/g)</u>					1.04	0.01		EXRF	80RAP 03
0.93	0.13		AA	85EVA 01	1.05	0.09	7	RTNA	77GIL 03
0.94	0.06		XRF	86GIA 01	1.05	0.09	7	RTNA	80GAL 02
0.99	0.16		ITNA	78GIL 01	1.05	0.09	7	RTNA	77GIL 03
<u>S (ug/g)</u>					1.07		11	HAA	85PIW 01
1623	32		CB	86GAU 01	1.08			ICPES	84MIA 01
1780	60		WXRF	86BOW 01	1.09	0.11	7	RTNA	80GAL 02
1790		D	CB	85JAC 01	1.1	0.02	11	XRF	80RAP 01
1790	100	6	CB	84JAC 01	1.1	0.02		XRF	81KNA 01
1810		D	CB	85JAC 01	1.1	0.09		ICPES	85NAK 01
1810	70	6	CB	84JAC 01	1.1	0.1		HAA	84NAR 01
1830	140		CB	86BOW 01	1.11	0.05		RTNA	78GIL 01
1860	50		ICPES	85WHI 02	1.12	0.01	7	RTNA	77GIL 03
1980	210		CB	84GLA 11	1.12	0.01		ITNA	80GAL 02
					1.12	0.01		ITNA	78GIL 01
					1.17	0.15		RTNA	84DEL 01
					1.17	0.18	7	RTNA	80GAL 02
					1.17	0.18	7	RTNA	77GIL 03

TABLE 1567-2: INDIVIDUAL DATA FOR NBS SRM 1567 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Sr (ng/g)</u>					<u>Zn (ug/g)</u>				
0.82	0.05		RTNA	86TSU 01	9.1	0.5		RTNA	84BYR 02
					9.9	0.5	2	FAA	84MIL 01
<u>Sn (ng/g)</u>					10	0.1		ICPES	85WNI 02
<	20	L	ICPES	82HAH 01	10.2			ICPES	81WOL 01
<u>Sr (ug/g)</u>					10.3	0.4		XRF	86GIA 01
0.82	0.04		XRF	86GIA 01	10.5	0.7	1	ICPES	81WOL 02
0.97	0.2		AA	85EVA 01	10.5	0.7	11	ICPES	82JON 01
1.02		1	ICPES	81WOL 02	10.6	0.4		ICPES	83SCH 04
1.08	0.06	1	ICPES	81WOL 02	10.6	0.4	11	ICPES	82JON 01
<u>TL (ng/g)</u>					10.6	0.5	11	ICPES	82JON 01
<	3	11	ASV	84LIE 01	10.6	0.7	11	ICPES	82JON 01
2		11	ASV	84LIE 01	10.8		1	ICPES	81WOL 02
3		11	ASV	84LIE 01	10.88	0.56		ITNA	78GIL 01
3		11	ASV	84LIE 01	10.9	0.1	6	ICPES	82KUE 01
<u>U (ng/g)</u>					11	0.2	6	ICPES	82KUE 01
<	1		DNA	86GAU 01	11	0.4		ICPES	80SCH 08
0.95	0.24	35	DNA	80GLA 04	11.1	0.4	6	ICPES	82KUE 01
<u>V (ng/g)</u>					11.3	1.1		ICPES	81KNA 01
<	50	L	ICPES	82JON 01	12.6	1.3	2	FAA	84MIL 01
11.2	1.2		RTNA	84BYR 02	13.8	1.8		CPXRF	84BIS 01
11.3			COLOR	85EVA 02	14.8	4.2	12	FAA	85CAR 02

TABLE 1568-1: COMPILED DATA FOR NBS SRM 1568 RICE FLOUR (revised 3/1/86)

ELE	UNITS	NBS		CONSENSUS		MEDIAN	RANGE	NAA		ICPES		OTHER METHODS	
		Mean \pm SD	(n)	Mean \pm SD	(n)			Mean \pm SD	(n)	Mean \pm SD	(n)	Method	Mean (n) Method
Al	ug/g	---	(1)	115	(1)	---	---	---	(9)	---	(1)	SIMS	---
As	ng/g	410 \pm 50	(24)	414 \pm 26	(24)	410	370 - 464	409 \pm 31	(9)	420 \pm 40	(3)	AA	420 (1) XRF
B	ug/g	---	(1)	< 1	(1)	---	---	---	(9)	---	(1)	ICGS	---
Bi	ng/g	---	(1)	< 8	(1)	---	---	---	(9)	< 8	(1)	---	---
Br	ug/g	1	(3)	1.11 \pm 0.17	(3)	1.19	0.92 - 1.23	1.08	(2)	---	(1)	XRF	---
Ca	ug/g	140 \pm 20	(14)	148 \pm 8	(14)	146	135 - 162	---	(5)	144 \pm 15	(5)	FAE	158 (1) XRF
Ca	ug/g	---	(1)	---	(1)	---	---	---	(5)	---	(8)	AA	---
Cd	ng/g	29 \pm 4	(7)	27 \pm 4	(7)	28	20 - 30	29.4	(2)	28	(1)	ASV	27 (1) IDMS
Cd	ng/g	---	(1)	---	(1)	---	---	---	(2)	---	(1)	AA	---
Cl	ug/g	---	(4)	238 \pm 13	(4)	238	220 - 248	238 \pm 13	(4)	---	(1)	---	---
Co	ng/g	20 \pm 10	(3)	19 \pm 2	(3)	18	16.8 - 21	19.5	(2)	---	(1)	AA	---
Cr	ng/g	---	(3)	240 \pm 180	(3)	200	80 - 430	---	(2)	140	(2)	FAE	---
Cs	ng/g	---	(1)	< 200	(1)	---	---	< 200	(4)	---	(1)	---	---
Cu	ug/g	2.2 \pm 0.3	(18)	2.08 \pm 0.16	(18)	2.1	1.86 - 2.4	2.09 \pm 0.16	(4)	2.04 \pm 0.12	(6)	IDMS	2.3 (1) FAE
Cu	ug/g	---	(1)	---	(1)	---	---	---	(4)	---	(2)	HPLC	2.21 (1) XRF
Cu	ug/g	---	(2)	---	(2)	---	---	---	(1)	---	(3)	AA	---
F	ng/g	---	(2)	190	(2)	---	180 - 200	---	(1)	---	(2)	ISE	---
Fe	ug/g	8.7 \pm 0.6	(14)	8.0 \pm 1.2	(14)	7.8	5.6 - 9.7	8.85	(1)	8.2 \pm 0.9	(8)	FAE	9.1 (1) XRF
Fe	ug/g	---	(1)	---	(1)	---	---	---	(1)	---	(1)	AA	---
Ge	ng/g	---	(1)	< 20	(1)	---	---	---	(1)	< 20	(1)	---	---
H2O-	%	---	(2)	11	(2)	---	---	---	(4)	---	(1)	GRAV	---
Hg	ng/g	6.0 \pm 0.7	(5)	6.3 \pm 0.4	(5)	6.4	5.6 - 6.8	6.5 \pm 0.2	(4)	---	(1)	AA	---
I	ng/g	---	(5)	11.2 \pm 0.4	(5)	11	10.9 - 12	11.2 \pm 0.4	(5)	---	(1)	---	---
K	ug/g	1120 \pm 20	(9)	1050 \pm 90	(9)	1080	900 - 1150	1125	(1)	1060 \pm 100	(4)	FAE	1360 (1) XRF
K	ug/g	---	(5)	---	(5)	---	---	---	(4)	---	(3)	AA	---
Mg	ug/g	---	(16)	497 \pm 30	(16)	510	450 - 527	---	(8)	490 \pm 30	(4)	SIMS	---
Mn	ug/g	20.1 \pm 0.4	(5)	20.5 \pm 1.0	(5)	20.1	19.1 - 22.4	21	(2)	19.9 \pm 0.4	(8)	AA	22.1 (1) XRF
Mo	ug/g	1.6	(5)	1.61 \pm 0.04	(5)	1.6	1.59 - 1.68	1.64	(2)	1.59 \pm 0.01	(3)	---	---
N	%	---	(1)	1.5	(1)	---	---	---	(3)	---	(1)	---	---
Na	ug/g	6.0 \pm 1.5	(4)	7.3 \pm 1.8	(4)	6.4	6 - 10	7.8 \pm 2.0	(3)	---	(1)	FAE	---
Ni	ng/g	160	(4)	164 \pm 12	(4)	160	150 - 180	---	(2)	155	(2)	XRF	165 (1) AA

TABLE 1568-1: COMPILED DATA FOR NBS SRM 1568 RICE FLOUR (cont.)

ELE	UNITS	NBS		CONSENSUS		MEDIAN	RANGE	NAA		ICPES		OTHER METHODS			
		Mean	SD	Mean	SD (n)			Mean	SD (n)	Mean	SD (n)	Mean	SD (n)	Method	Mean (n)
P	ug/g	---	---	1630 ± 40	(4)	1600	1600 - 1680	---	---	1630 ± 40	(4)	---	---	---	---
Pb	ng/g	45 ± 10	---	32	(2)	---	30 - 35	---	---	---	---	32.5	(2)	ASV	100 (1) XRF
Rb	ug/g	7	---	8.0 ± 0.6	(3)	8.2	7.27 - 8.4	7.27	(1)	---	---	8.3	(2)	XRF	---
S	ug/g	---	---	1350 ± 60	(6)	1360	1256 - 1400	---	---	1400	(1)	1350 ± 60	(4)	CB	1320 (1) XRF
Sb	ng/g	---	---	7.45	(2)	---	5 - 9.9	7.45	(2)	---	---	---	---	---	---
Sc	ng/g	---	---	0.19	(2)	---	0.13 - 0.25	0.19	(2)	---	---	---	---	---	---
Se	ng/g	400 ± 100	---	380 ± 50	(34)	380	280 - 480	440 ± 20	(8)	360 ± 25	(3)	396 ± 9	(5)	XRF	390 (1) GC-MS
Se	ng/g	---	---	---	---	---	---	---	---	---	---	350 ± 40	(15)	AA	---
Sn	ng/g	---	---	< 20	---	---	---	---	< 20	---	---	---	---	---	---
Sr	ng/g	---	---	190	(1)	---	---	---	---	---	---	190	(1)	XRF	---
Te	ng/g	< 2	---	---	---	---	---	---	---	---	---	---	---	---	---
Tl	ng/g	---	---	< 2	---	---	---	---	---	---	---	< 2	ASV	---	< 2 AA
U	ng/g	---	---	0.89	(1)	---	---	0.89	(1)	---	---	---	---	---	---
V	ng/g	---	---	6.2	(1)	---	---	6.2	(1)	---	---	---	---	---	---
Zn	ug/g	19.4 ± 1.0	---	19.7 ± 0.6	(16)	19.8	18.7 - 21.3	20	(2)	19.7 ± 0.4	(9)	19.5	(2)	HPLC	21.9 (1) XRF
Zn	ug/g	---	---	---	---	---	---	---	---	---	---	19.3	(2)	AA	---

COMPOUND	CAS #	UNITS	NBS	CONSENSUS	
				Mean	(n)
Total Folate	---	ug/g	---	0.21	(1)
Total Pantothenates	---	ug/g	---	3.8	(1)
Thiamine	---	ug/g	---	1.4	(1)
Protein	---	%	---	8.4	(1)
Nicotinic Acid	59676	ug/g	---	15.7	(1)
Vitamin B-6	65236	ug/g	---	1.4	(1)
Riboflavin	83885	ug/g	---	0.33	(1)

TABLE 1568-2: INDIVIDUAL DATA FOR NBS SRM 1568 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Total Folates (ug/g)</u>					<u>As (ng/g) cont.</u>				
0.21			VV	85TAN 01	410			HAA	84IKE 01
					410	20	7	RTNA	80GAL 02
<u>Total Pantothenates (ug/g)</u>					410	20	11	HAA	81RAP 01
3.8			VV	85TAN 01	410	70	11	HAA	81RAP 01
					410	70		HAA	81KNA 01
<u>Thiamine (ug/g)</u>					420	20		HAA	84NAR 01
1.4			VV	85TAN 01	420	90		XRF	86GIA 01
					436	18		HAA	82TAM 01
<u>Protein (%)</u>					440			HAA	83KUM 01
8.4			VV	85TAN 01	440	50	H	ICPES	82HAH 01
					440	80		HAA	85NAR 03
					452	70		ICPES	81WOL 01
<u>Nicotinic acid (ug/g)</u>					460	70		IENA	82GLA 02
15.7			VV	85TAN 01	464	11		RTNA	84BYR 02
<u>Vitamin B-6 (ug/g)</u>					<u>B (ug/g)</u>				
1.4			VV	85TAN 01	<	1	L	TCGS	82GLA 02
<u>Riboflavin (ug/g)</u>					<u>Bi (ng/g)</u>				
0.33			VV	85TAN 01	<	8	L	ICPES	82HAH 01
<u>Al (ug/g)</u>					<u>Br (ug/g)</u>				
115			SIMS	83RAM 01	0.92	0.12		IENA	84GLA 11
<u>As (ng/g)</u>					1.19	0.17		XRF	86GIA 01
41	2		RTNA	84DEL 01	1.23	0.08		ITNA	78GIL 01
90	10		COLOR	77BUR 01	<u>Ca (ug/g)</u>				
320	40	11	HAA	82JON 01	95	4		CPXRF	84BIS 01
370			ICPES	84MIA 01	120	30		ICPES	85WHI 02
380	20	7	RTNA	77GIL 03	135	4		FAE	83MAR 04
387			RTNA	85TIA 01	136	5	12	FAA	85CAR 02
390	30		HAA	85YAM 01	142	3		ICPES	81WOL 01
390	70	7	RTNA	77GIL 03	144		38	AA	81YAS 01
390	80	7	RTNA	77GIL 03	145		38	AA	81YAS 01
400	10		RTNA	78GIL 01	146		38	AA	81YAS 01
400	10		FAA	84XIA 01	146		38	AA	81YAS 01
400	10	7	RTNA	80GAL 02	148	3	11	ICPES	82JON 01
400	10	11	HAA	81RAP 01	148	5	11	ICPES	82JON 01
					149		38	AA	81YAS 01
					151		38	AA	81YAS 01
					158	14		XRF	86GIA 01
					160	10		ICPES	85LYO 01
					162	10	12	FAA	85CAR 02

TABLE 1568-2: INDIVIDUAL DATA FOR NBS SRM 1568 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Cd (ng/g)</u>					<u>Cu (ug/g) cont.</u>				
20			ASV	82GAJ 01	2.2	0.2	2	FAA	84MIL 01
25	2		ASV	82SAT 02	2.2	0.3		ICPES	83SCH 04
27	2		IDMS	84BRO 03	2.21	0.22		XRF	86GIA 01
28	2		ICPES	83SCH 04	2.3	0.2		FAE	83MAR 04
29	9	7	RTNA	80GAL 02	2.4	0.1	2	FAA	84MIL 01
29.8	1.4		RTNA	84BYR 02	2.8	0.3	12	FAA	85CAR 02
30	10		FAA	80SCH 08					
40	20	11	ICPES	82JON 01	<u>F (ng/g)</u>				
60	30	11	ICPES	82JON 01	180	40		ISE	83KNA 01
					200			ISE	84GLA 02
<u>Cl (ug/g)</u>					<u>Fe (ug/g)</u>				
220			ITNA	86GAU 01	5.6	0.9	2	FAA	84MIL 01
238			ITNA	84GLA 11	6.4	0.6	12	FAE	83MAR 04
246	11		IENA	84GLA 11	7	0.3	2	FAA	84MIL 01
248			ITNA	85GAU 04	7.1	0.4	11	ICPES	82JON 01
<u>Co (ng/g)</u>					7.3	0.4	11	ICPES	82JON 01
16.8	3.8		FAA	84BOR 01	7.6	0.4	11	ICPES	82JON 01
18	2		ITNA	78GIL 01	7.8	0.4	11	ICPES	82JON 01
21	10		RTNA	84BYR 02	8	1		ICPES	80SCH 08
<u>Cr (ng/g)</u>					8.85	0.94		ITNA	78GIL 01
<	400	L	XRF	86GIA 01	9.06	1		ICPES	81WOL 01
80	80	11	ICPES	82JON 01	9.1	0.9		ICPES	85LYO 01
200	200	11	ICPES	82JON 01	9.1	1.2		XRF	86GIA 01
430	70		FAE	83MAR 04	9.4	0.3		ICPES	81KNA 01
<u>Cs (ng/g)</u>					9.7	2.7	12	FAE	83MAR 04
<	200	L	ITNA	82GLA 02	11.2	0.7		CPXRF	84BIS 01
<u>Cu (ug/g)</u>					<u>Ge (ng/g)</u>				
1.76	0.1		CPXRF	84BIS 01	<	20	L	ICPES	82HAH 01
1.86	0.03		RTNA	84BYR 02	<u>H2O (%)</u>				
1.87	0.11	11	HPLC	85ICH 01	9.9			VV	85TAN 01
1.9	0.2	12	FAA	85CAR 02	<u>H2O- (%)</u>				
1.9	0.2	11	ICPES	82JON 01	12		D	GRAV	85NAR 03
1.9	0.2	11	ICPES	82JON 01	12			GRAV	84NAR 01
1.95	0.09	11	HPLC	85ICH 01	<u>Hg (ng/g)</u>				
2.01	0.01		ICPES	81WOL 01	<	80	L	XRF	86GIA 01
2.1			RTNA	85TIA 01	5.6	0.5		CVAA	81KNA 01
2.1	0.1		ICPES	81KNA 01	6.4	0.5		RTNA	84DEL 01
2.1	0.2		ICPES	80SCH 08	6.4	1		RTNA	78GIL 01
2.13	0.06		IDMS	84BRO 03	6.4	1	7	RTNA	80GAL 02
2.2	0.13	7	RTNA	80GAL 02	6.8	1.05		RTNA	84BYR 02
2.2	0.13		RTNA	78GIL 01					

TABLE 1568-2: INDIVIDUAL DATA FOR NBS SRM 1568 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>I (ng/g)</u>					<u>Mo (ug/g)</u>				
10.9	1.2		RTNA	84BYR 02	1.59	0.07	11	ICPES	82JON 01
11	1		RTNA	83ALL 01	1.59	0.09	11	ICPES	82JON 01
11	6		IENA	84GLA 11	1.6	0.13		ICPES	81WOL 01
11.1	1	35	RTNA	81ALL 01	1.61			RTNA	85TIA 01
12	1	34	RTNA	81ALL 01	1.68	0.18		RTNA	84MOK 02
<u>K (ug/g)</u>					<u>N (%)</u>				
900	100		FAE	83MAR 04	1.5			VV	85TAN 01
965	11		ICPES	81WOL 01					
970	160		ICPES	85WHI 02	<u>Na (ug/g)</u>				
995	48	12	FAA	85CAR 02					
1080	20	2	FAA	84MIL 01	<	20		ICPES	85WHI 02
1100	30	2	FAA	84MIL 01	6	1.6		FAE	83MAR 04
1125	16		ITNA	78GIL 01	6.4			ITNA	84GLA 11
1140	30	11	ICPES	82JON 01	6.9	0.4		ITNA	78GIL 01
1150	80	11	ICPES	82JON 01	10			ITNA	85GAU 04
1239	28		CPXRF	84BIS 01	<u>Ni (ng/g)</u>				
1360	160		XRF	86GIA 01					
<u>Mg (ug/g)</u>					150	20	11	ICPES	82JON 01
					160	30	11	ICPES	82JON 01
450	20		ICPES	85WHI 02	165			FAA	85LON 01
490	30		ICPES	85LYO 01	180	60		XRF	86GIA 01
510	10	11	ICPES	82JON 01	2000	100		CPXRF	84BIS 01
510	20	11	ICPES	82JON 01	<u>P (ug/g)</u>				
527	6		SIMS	83RAM 01					
<u>Mn (ug/g)</u>					1420	2		ICPES	84PRI 01
					1600	60	11	ICPES	82JON 01
19.1	0.9	11	ICPES	82JON 01	1600	100		ICPES	85LYO 01
19.5	1	2	FAA	84MIL 01	1630	30	11	ICPES	82JON 01
19.7	0.4		ICPES	83SCH 04	1680	40		ICPES	85WHI 02
19.8	1.5		ICPES	85LYO 01	<u>Pb (ng/g)</u>				
19.9	0.4		ICPES	81WOL 01					
19.95	0.69		ITNA	78GIL 01					
20	3		ICPES	80SCH 08	<	100	L	ICPES	82JON 01
20.1	0.3	11	ICPES	82JON 01	<	100	L	ICPES	82JON 01
20.2	0.5	11	ICPES	82JON 01	30			ASV	82GAJ 01
20.7	1.4		ICPES	85WHI 02	35	4		ASV	82SAT 02
20.8	0.4	12	FAA	85CAR 02	100	90		XRF	86GIA 01
21	0.4	12	FAA	85CAR 02	<u>Rb (ug/g)</u>				
21.4	1.4		ICPES	81KNA 01					
22.1	0.7		RTNA	84BYR 02	7.27	0.21		ITNA	78GIL 01
22.1	2.8		XRF	86GIA 01	8.2	0.8		CPXRF	84BIS 01
22.4	0.9	2	FAA	84MIL 01	8.4	0.9		XRF	86GIA 01
25.8	1.1		CPXRF	84BIS 01					

TABLE 1568-2: INDIVIDUAL DATA FOR NBS SRM 1568 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>S (ug/g)</u>					<u>Se (ng/g) cont.</u>				
1059	5		ICPES	84PRI 01	420	30		ITNA	78GIL 01
1256	58		CB	86GAU 01	420	30	7	RTNA	77GIL 03
1320	30		WXRf	86BOW 01	430	40		RTNA	84DEL 01
1360	50		CB	86BOW 01	450	30		RTNA	78GIL 01
1380		D	CB	85JAC 01	460	80	7	RTNA	77GIL 03
1380	60	6	CB	84JAC 01	460	80	7	RTNA	80GAL 02
1400			ICPES	85WHI 02	480	70	7	RTNA	80GAL 02
1400		D	CB	85JAC 01	480	70		HAA	82TAM 01
1400	30	6	CB	84JAC 01	<u>Sn (ng/g)</u>				
1520	70		CB	84GLA 11					
<u>Sb (ng/g)</u>					<	20	L	ICPES	82HAH 01
<	2	L	ICPES	82HAH 01	<u>Sr (ng/g)</u>				
5	1		RTNA	78GIL 01					
9.9	0.3		RTNA	84BYR 02	190	40		XRF	86GIA 01
<u>Sc (ng/g)</u>					<u>Tl (ng/g)</u>				
0.13	0.17		ITNA	86GAU 01	<	2	11	ASV	84LIE 01
0.25			ITNA	84GLA 11	<	2	11	ASV	84LIE 01
<u>Se (ng/g)</u>					<	2	11	ASV	84LIE 01
					<	2	11	FAA	84LIE 01
280	30	11	HAA	82JON 01	<u>U (ng/g)</u>				
280	55		FAA	81MEY 01					
300		11	HAA	85PIW 01	<	1		DNA	86GAU 01
315	14		HAA	81HAH 01	0.89	0.22	35	DNA	80GLA 04
320	40	11	HAA	82JON 01	<u>V (ng/g)</u>				
320	50		HAA	81MEY 01					
331	29		ICPES	81WOL 01					
338	3	7	RTNA	77GIL 03	<	50	L	ICPES	82JON 01
350		11	HAA	85PIW 01	6.2	0.8		RTNA	84BYR 02
370	30		HAA	80RAP 02	<u>Zn (ug/g)</u>				
370	60	H	ICPES	82HAH 01					
380			ICPES	84MIA 01	17.3	7.2	12	FAA	85CAR 02
380	10		HAA	81HAN 01	18.7	4.6	2	FAA	84MIL 01
380	20		HAA	83KOL 01	19.1	0.4		RTNA	84BYR 02
380	40		HAA	84NAR 01	19.1	2.4		ICPES	85LYO 01
380	40		XRF	86GIA 01	19.3	0.7	11	ICPES	82JON 01
380	40		HAA	85YAM 01	19.4	0.4		ICPES	81WOL 01
380	50		HAA	80VIJ 01	19.5	0.5	11	HPLC	85ICH 01
390	20		GC-MS	81REA 02	19.5	0.6	11	HPLC	85ICH 01
390	70		HAA	81REA 01	19.6	0.4		ICPES	80SCH 08
400	8		EXRF	80RAP 03	19.8	0.8	11	ICPES	82JON 01
400	20	11	XRF	80RAP 01	19.9	0.4		ICPES	83SCH 04
400	20		XRF	81KNA 01	19.9	1.4	2	FAA	84MIL 01
400	100		HAA	85NAR 03	19.97	0.69		ITNA	78GIL 01
400	100	11	XRF	80RAP 01	20	1	11	ICPES	82JON 01
420	30		ITNA	80GAL 02					

TABLE 1568-2: INDIVIDUAL DATA FOR NBS SRM 1568 (cont.)

Conc	Uncer	Com	Method	Reference	
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>Zn (ug/g) cont.</u>					
20.2	0.8	11	ICPES	82JON 01	
20.4	0.9		ICPES	85WHI 02	
21.3	1.3		ICPES	81KNA 01	
21.9	1.8		XRF	86GIA 01	
26.3	3.1		CPXRF	84BIS 01	

TABLE 1569-1: COMPILED DATA FOR NBS SRM 1569 BREWER'S YEAST (revised 3/1/86)

ELEMENT	UNITS	NBS		CONSENSUS		MEDIAN	RANGE	NAA		ICPES		OTHER METHODS	
		Mean \pm SD	(n)	Mean \pm SD	(n)			Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n) Method
Al	ug/g	---	(2)	2150	(2)	---	2000 - 2300	2300	(1)	2000	(1)	---	
As	ng/g	---	(3)	590 \pm 70	(3)	560	530 - 670	670	(1)	---		545	(2) AA
B	ug/g	---	(1)	6.2	(1)	---	---	---		---		6.2	(1) TCGS
Be	ng/g	---	(1)	22	(1)	---	---	---		---		22	(1) FAAC
Br	ug/g	---	(3)	3.6 \pm 3.0	(3)	3.4	0.65 - 6.7	3.6 \pm 3.0	(3)	---		---	
Ca	ug/g	---	(4)	2370 \pm 100	(4)	2290	2270 - 2490	---		2370 \pm 100	(4)	---	
Cd	ng/g	---	(4)	170 \pm 90	(4)	120	80 - 290	---		170 \pm 90	(4)	---	
Ce	ug/g	---	(1)	2.3	(1)	---	---	2.3	(1)	---		---	
Cl	ug/g	---	(2)	485	(2)	---	460 - 510	485	(2)	---		---	
Co	ng/g	---	(2)	280	(2)	---	260 - 300	280	(2)	---		---	
Cr	ug/g	2.12 \pm 0.05	(16)	2.00 \pm 0.26	(16)	2.08	1.2 - 2.17	2.05 \pm 0.17	(11)	1.2	(1)	1.7 \pm 0.6	(3) AA
Cr	ug/g	---		---		---	---	---		---		2.08	(1) IDMS
Cr	ug/g	---		---		---	---	---		---		2	(1) NM
Cs	ng/g	---		< 200		---	---	< 200		---		---	
Cu	ug/g	---	(5)	16 \pm 3	(5)	17.7	11 - 18.4	11	(1)	16.8 \pm 2.5	(4)	---	
Eu	ng/g	---	(1)	20	(1)	---	---	20	(1)	---		---	
F	ug/g	---	(2)	14.5	(2)	---	14 - 15	---		---		14.5	(2) ISE
Fe	ug/g	---	(4)	660 \pm 50	(4)	660	590 - 707	648	(2)	676	(2)	---	
Ga	ug/g	---	(1)	7.1	(1)	---	---	7.1	(1)	---		---	
Hf	ng/g	---	(1)	130	(1)	---	---	130	(1)	---		---	
Hg	ng/g	---	(1)	22	(1)	---	---	---		---		22	(1) AA
I	ng/g	---	(2)	46	(2)	---	32 - 60	46	(2)	---		---	
K	%	---	(6)	1.52 \pm 0.11	(6)	1.45	1.4 - 1.71	1.63	(2)	1.47 \pm 0.08	(4)	---	

TABLE 1569-1: COMPILED DATA FOR NBS SRM 1569 BREWER'S YEAST (cont.)

ELEMENT	UNITS	NBS		CONSENSUS		MEDIAN	RANGE	NAA		ICPES		OTHER METHODS	
		Mean \pm	SD	Mean \pm	SD (n)			Mean \pm	SD (n)	Mean \pm	SD (n)	Mean \pm	SD (n) Method
Li	ng/g	---	---	440	(1)	---	---	---	---	---	---	440	(1) AAC
Mg	ug/g	---	---	1850 \pm 100	(5)	1870	1730 - 1980	1780	(1)	1870 \pm 100	(4)	---	---
Mn	ug/g	---	---	10.0 \pm 0.7	(5)	10	9.1 - 10.9	10	(1)	10.0 \pm 0.8	(4)	---	---
Mo	ug/g	---	---	3.6 \pm 0.3	(4)	3.4	3.3 - 3.9	---	---	3.6 \pm 0.3	(4)	---	---
Na	ug/g	---	---	610 \pm 90	(3)	660	510 - 670	610 \pm 90	(3)	---	---	---	---
Ni	ug/g	---	---	5.3 \pm 0.7	(4)	4.8	4.6 - 6	---	---	5.3 \pm 0.7	(4)	---	---
P	%	---	---	1.04 \pm 0.03	(4)	1.02	1.0 - 1.08	---	---	1.04 \pm 0.03	(4)	---	---
Pb	ng/g	---	---	350	(2)	---	200 - 500	---	---	350	(2)	---	---
Rb	ug/g	---	---	16	(1)	---	---	16	(1)	---	---	---	---
S	ug/g	---	---	4140 \pm 40	(3)	4140	4100 - 4170	---	---	---	---	4140	(1) XRF
S	ug/g	---	---	---	---	---	---	---	---	---	---	4135	(2) CB
Sb	ng/g	---	---	152	(2)	---	75 - 230	152	(2)	---	---	---	---
Sc	ng/g	---	---	187 \pm 21	(5)	180	170 - 220	187 \pm 21	(5)	---	---	---	---
Se	ug/g	---	---	0.97 \pm 0.04	(3)	0.98	0.92 - 1.01	0.92	(1)	---	---	1	(2) AA
Sr	ug/g	---	---	10.3	(1)	---	---	10.3	(1)	---	---	---	---
Th	ug/g	---	---	3.7	(1)	---	---	3.7	(1)	---	---	---	---
Ti	ug/g	---	---	38	(1)	---	---	38	(1)	---	---	---	---
U	ng/g	---	---	470 \pm 16	(8)	470	441 - 490	474 \pm 11	(7)	---	---	441	(1) IDMS
U-235/238	ratio	---	---	0.0073	(1)	---	---	---	---	---	---	0.0073	(1) IDMS
V	ug/g	---	---	4.25	(2)	---	4.1 - 4.4	4.1	(1)	4.4	(1)	---	---
Zn	ug/g	---	---	65 \pm 3	(9)	65	59 - 70	70	(1)	64.5 \pm 3.1	(8)	---	---

TABLE 1569-2: INDIVIDUAL DATA FOR NBS SRM 1569 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Al (ug/g)</u>					<u>Cr (ug/g)</u>				
2000	56	11	ICPES	82JON 01	0.078	0.026		FAA	74WOL 01
2300	10		ITNA	78BER 01	0.7	0.1	11	ICPES	82JON 01
					0.87			FAA	80CHA 01
<u>As (ng/g)</u>					1.04	0.04	7	FAA	80CHA 01
530	80	11	HAA	82JON 01	1.12	0.08		RTNA	78GOE 01
560	30	11	HAA	82JON 01	1.2	0.6	11	ICPES	82JON 01
670	70		IENA	82GLA 02	1.558	0.015	11	RTNA	78MCC 01
<u>B (ug/g)</u>					2.00	0.02		NM	80SHI 01
6.2			TCGS	82GLA 02	2.02	0.1		FAA	83CAR 02
<u>Be (ng/g)</u>					2.043		11	NAA	79VER 01
22	6		FAAC	86GAU 01	2.074	0.012	11	RTNA	78MCC 01
<u>Br (ug/g)</u>					2.08	0.09		IDMS	79VEI 01
0.65	0.03		ITNA	78BER 01	2.082	0.013	24	ITNA	78MCC 01
3.4			IENA	84GLA 11	2.094		11	NAA	79VER 01
6.7	0.4		ITNA	79KOB 03	2.096	0.02	24	ITNA	78MCC 01
<u>Ca (ug/g)</u>					2.1	0.5		ITNA	79KOB 03
2270	70	11	ICPES	82JON 01	2.119	0.025	24	ITNA	78MCC 01
2290	10	11	ICPES	82JON 01	2.12	0.08		ITNA	78BER 01
2420	40	11	ICPES	82JON 01	2.13	0.12	7	FAA	80CHA 01
2490	30	11	ICPES	82JON 01	2.13	0.13		RTNA	79TJI 01
<u>Cd (ng/g)</u>					2.17	0.11		ITNA	82GLA 02
80	40	11	ICPES	82JON 01	<u>Cs (ng/g)</u>				
120	70	11	ICPES	82JON 01	<	200	L	ITNA	82GLA 02
180	70	11	ICPES	82JON 01	<u>Cu (ug/g)</u>				
290	60	11	ICPES	82JON 01	11	2		ITNA	78BER 01
<u>Ce (ug/g)</u>					13	1	11	ICPES	82JON 01
2.3	0.1		ITNA	78BER 01	17.7	0.2	11	ICPES	82JON 01
<u>Cl (ug/g)</u>					18.1	0.7	11	ICPES	82JON 01
460	30		ITNA	78BER 01	18.4	0.3	11	ICPES	82JON 01
510			ITNA	84GLA 11	<u>Eu (ng/g)</u>				
900			IENA	84GLA 11	20	10		ITNA	79KOB 03
<u>Co (ng/g)</u>					<u>F (ug/g)</u>				
260	20		ITNA	78BER 01	14	2		ISE	83KNA 01
300	60		ITNA	79KOB 03	15	2		ISE	84GLA 02
					<u>Fe (ug/g)</u>				
					257	34	11	ICPES	82JON 01
					499	15	11	ICPES	82JON 01
					590	24		ITNA	79KOB 03
					660	15	11	ICPES	82JON 01
					693	25	11	ICPES	82JON 01
					707	16		ITNA	78BER 01

TABLE 1569-2: INDIVIDUAL DATA FOR NBS SRM 1569 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ga (ug/g)</u>					<u>Na (ug/g)</u>				
7.1	0.5		ITNA	78BER 01	510	30		ITNA	78BER 01
<u>Hf (ng/g)</u>					660			ITNA	84GLA 11
					670	42		ITNA	79KOB 03
130	10		ITNA	78BER 01	<u>Ni (ug/g)</u>				
<u>Hg (ng/g)</u>					4.6	0.3	11	ICPES	82JON 01
					4.8	0.1	11	ICPES	82JON 01
22			CVAA	82GLA 02	5.9	0.2	11	ICPES	82JON 01
<u>I (ng/g)</u>					6	0.2	11	ICPES	82JON 01
32			IENA	84GLA 11	<u>P (%)</u>				
60	20		IENA	82SAT 01	1	0.04	11	ICPES	82JON 01
<u>K (%)</u>					1.02	0.03	11	ICPES	82JON 01
					1.04	0.05	11	ICPES	82JON 01
1.4	0.1	11	ICPES	82JON 01	1.08	0.04	11	ICPES	82JON 01
1.45	0.007	11	ICPES	82JON 01	<u>Pb (ng/g)</u>				
1.45	0.05	11	ICPES	82JON 01					
1.55	0.05		ITNA	78BER 01	200	200	11	ICPES	82JON 01
1.59	0.04	11	ICPES	82JON 01	500	500	11	ICPES	82JON 01
1.71	0.12		ITNA	79KOB 03	<u>Rb (ug/g)</u>				
<u>Li (ng/g)</u>									
440	20		AAC	85GAU 04	16	1		ITNA	78BER 01
<u>Mg (ug/g)</u>					<u>S (ug/g)</u>				
1730	70	11	ICPES	82JON 01	4100	90		CB	86BOW 01
1780	100		ITNA	78BER 01	4140	120		WXRF	86BOW 01
1870	50	11	ICPES	82JON 01	4170	120		CB	84GLA 11
1900	60	11	ICPES	82JON 01	<u>Sb (ng/g)</u>				
1980	60	11	ICPES	82JON 01					
<u>Mn (ug/g)</u>					75	5		ITNA	78BER 01
					230	50		ITNA	79KOB 03
7	0.8		ITNA	78BER 01	<u>Sc (ng/g)</u>				
9.1	0.6	11	ICPES	82JON 01					
9.6	0.6	11	ICPES	82JON 01	170	9		ITNA	86GAU 01
10	1.5		ITNA	79KOB 03	170	14		ITNA	84GLA 11
10.4	0.8	11	ICPES	82JON 01	180	10		ITNA	78BER 01
10.9	0.7	11	ICPES	82JON 01	196			ITNA	85GAU 04
<u>Mo (ug/g)</u>					220	30		ITNA	79KOB 03
					<u>Se (ug/g)</u>				
3.3	0.3	11	ICPES	82JON 01					
3.4	0.1	11	ICPES	82JON 01	0.92	0.09		ITNA	78BER 01
3.8	0.2	11	ICPES	82JON 01	0.98	0.05	11	HAA	82JON 01
3.9	0.2	11	ICPES	82JON 01	1.01	0.06	11	HAA	82JON 01

TABLE 1569-2: INDIVIDUAL DATA FOR NBS SRM 1569 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Sr (ug/g)</u>					<u>U-235/238 (ratio)</u>				
10.3			IENA	85GAU 04	7.26	0.07	28	IDMS	82CUR 01
<u>Th (ug/g)</u>					<u>V (ug/g)</u>				
3.7	0.2		ITNA	78BER 01	1.46	0.05	11	ICPES	82JON 01
					4.1	0.1		ITNA	78BER 01
<u>Ti (ug/g)</u>					4.4	0.1	11	ICPES	82JON 01
38	2		ITNA	78BER 01	<u>Zn (ug/g)</u>				
<u>U (ng/g)</u>					30	4.3		ITNA	79KOB 03
441	4		IDMS	82CUR 01	59	6	11	ICPES	82JON 01
460	20	35	DNA	81GLA 03	63	2	11	ICPES	82JON 01
470	20		DNA	84GLA 02	64	4	11	ICPES	82JON 01
470	20		DNA	82GLA 02	64	5	11	ICPES	82JON 01
470	20	35	DNA	80GLA 04	65	2	11	ICPES	82JON 01
470	50	35	DNA	81GLA 04	65	2	11	ICPES	82JON 01
490	20		ITNA	78BER 01	66	2	11	ICPES	82JON 01
490	30		DNA	84GLA 11	70	2		ITNA	78BER 01
					70	4	11	ICPES	82JON 01

TABLE 1570-1: COMPILED DATA FOR NBS SRM 1570 SPINACH (revised 3/1/86)

ELE	UNITS	NBS		CONSENSUS		MEDIAN	RANGE		AA		NAA		ICPES		OTHER METHODS	
		Mean \pm SD	(n)	Mean \pm SD	(n)		Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)	Method	Mean (n) Method
Ag	ng/g	---	(2)	65	(1)	---	65 - 65	(1)	65	(1)	---	---	---	---	---	---
Al	ug/g	870 \pm 50	(13)	810 \pm 90	(13)	824	609 - 909	(1)	861	(1)	856 \pm 36	(6)	700 \pm 150	(8)	---	---
As	ng/g	150 \pm 50	(18)	153 \pm 20	(18)	150	114 - 180	(8)	158 \pm 13	(8)	147 \pm 23	(7)	170	(1)	---	170 (1) COLOR
Au	ng/g	---	(2)	1.2	(2)	---	0.4 - 2	(2)	---	(2)	1.2	(2)	---	---	---	---
B	ug/g	30	(5)	27.7 \pm 0.6	(5)	27.6	27 - 28.5	(4)	---	(4)	---	---	27.6 \pm 0.7	(4)	---	28 (1) TCGS
Ba	ug/g	---	(3)	14.9 \pm 2.5	(3)	13.9	13.1 - 17.8	(1)	---	(1)	13.1	(1)	15.8	(2)	---	---
Be	ng/g	---	(1)	16	(1)	---	---	(1)	---	(1)	---	---	16	(1)	---	---
Bi	ng/g	---	(1)	< 8	(1)	---	---	(1)	---	(1)	---	---	< 8	(1)	---	---
Br	ug/g	54	(14)	48 \pm 4	(14)	47	42.4 - 55.3	(13)	---	(13)	48 \pm 4	(13)	---	(1)	XRF	---
C	%	---	(2)	40.76	(2)	---	40.7 - 40.82	(2)	---	(2)	---	---	---	---	---	40.76 (2) CB
Ca	%	1.35 \pm 0.03	(21)	1.33 \pm 0.08	(21)	1.347	1.19 - 1.49	(1)	1.21	(1)	1.44 \pm 0.06	(3)	1.32 \pm 0.06	(14)	---	1.35 (1) NM
Cd	ug/g	1.5	(30)	1.43 \pm 0.14	(30)	1.42	1.2 - 1.7	(10)	1.41 \pm 0.16	(10)	1.51 \pm 0.12	(5)	1.5 \pm 0.2	(12)	---	1.67 (1) SSMS
Ce	ng/g	---	(2)	456	(2)	---	240 - 671	(2)	---	(2)	456	(2)	---	---	---	---
Cl	ug/g	---	(6)	6600 \pm 410	(6)	6500	6000 - 7000	(5)	---	(5)	6620 \pm 450	(5)	---	(1)	XRF	---
Co	ug/g	1.5	(12)	1.56 \pm 0.12	(12)	1.5	1.41 - 1.76	(3)	1.51 \pm 0.12	(3)	1.58 \pm 0.12	(8)	1.5	(1)	---	---
Cr	ug/g	4.6 \pm 0.3	(25)	4.3 \pm 0.5	(25)	4.4	3.33 - 5.2	(7)	4.6 \pm 0.6	(7)	4.6 \pm 0.4	(7)	3.9 \pm 0.5	(9)	---	4.7 (1) DCPES
Cr	ug/g	---	(4)	---	(4)	---	---	(4)	---	(4)	---	---	---	(1)	POL	6.0 (1) PAA
Cs	ng/g	---	(4)	61 \pm 9	(4)	63	48 - 68	(8)	---	(8)	61 \pm 9	(4)	---	---	---	---
Cu	ug/g	12 \pm 2	(45)	11.8 \pm 0.7	(45)	11.8	10.2 - 13.2	(10)	12.2 \pm 0.6	(10)	11.6 \pm 0.4	(8)	11.6 \pm 0.8	(17)	---	12.00 (1) IDMS
Cu	ug/g	---	(1)	---	(1)	---	---	(1)	---	(1)	---	---	---	(1)	ASV	---
Cu	ug/g	---	(2)	---	(2)	---	---	(2)	---	(2)	---	---	---	(2)	COLOR	13 (1) DCPES
Cu	ug/g	---	(36)	---	(36)	---	---	(36)	---	(36)	---	---	---	(1)	FAE	11.5 (1) SSMS
Eu	ng/g	20	(3)	15 \pm 4	(3)	14	11 - 20	(3)	---	(3)	15 \pm 4	(3)	---	---	---	---
F	ug/g	---	(2)	4.35	(2)	---	4.3 - 4.4	(2)	---	(2)	---	---	---	---	---	4.35 (2) ISE
Fe	ug/g	550 \pm 20	(36)	540 \pm 30	(36)	541	478 - 601	(9)	543 \pm 27	(9)	555 \pm 30	(6)	524 \pm 30	(15)	---	539 (2) COLOR
Fe	ug/g	---	(1)	---	(1)	---	---	(1)	---	(1)	---	---	---	(1)	NM	---
Gd	ng/g	---	(1)	60	(1)	---	---	(1)	---	(1)	60	(1)	---	---	---	---
Ge	ng/g	---	(2)	< 20	(2)	---	---	(2)	---	(2)	---	---	< 20	---	---	---
H	%	---	(1)	5.57	(1)	---	5.54 - 5.6	(1)	---	(1)	---	---	---	(1)	CB	5.6 (1) TCGS
H2O-	%	---	(1)	6	(1)	---	---	(1)	---	(1)	---	---	---	---	---	---
Hf	ng/g	---	(1)	40	(1)	---	---	(1)	---	(1)	40	(1)	---	---	---	---
Hg	ng/g	30 \pm 5	(6)	30 \pm 4	(6)	29	25 - 34	(4)	29 \pm 3	(4)	30	(2)	---	---	---	---
I	ug/g	---	(6)	1.20 \pm 0.12	(6)	1.1	1.08 - 1.325	(4)	---	(4)	1.25 \pm 0.12	(4)	---	---	---	---
In	ng/g	---	(2)	1.25	(2)	---	1.2 - 1.3	(2)	---	(2)	1.25	(2)	---	---	---	1.1 (1) PAA
K	%	3.56 \pm 0.03	(25)	3.56 \pm 0.15	(25)	3.59	3.26 - 3.9	(4)	3.51 \pm 0.15	(4)	3.55 \pm 0.16	(8)	3.59 \pm 0.08	(11)	---	---
La	ng/g	370	(7)	340 \pm 40	(7)	350	260 - 400	(5)	---	(5)	340 \pm 50	(5)	---	---	---	332 (2) NM
Li	ug/g	---	(2)	1.98	(2)	---	1.93 - 2.04	(1)	2.04	(1)	---	---	1.93	(1)	---	---

TABLE 1570-1: COMPILED DATA FOR NBS SRM 1570 SPINACH (cont.)

ELE	UNITS	NBS		CONSENSUS		MEDIAN	RANGE	AA		NAA		ICPES		OTHER METHODS	
		Mean \pm SD	(n)	Mean \pm SD	(n)			Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n) Method
Lu	ng/g	---	(1)	3	(1)	---	---	---	---	3	(1)	---	---	---	---
Mg	ug/g	---	(19)	8650 \pm 310	(19)	8600	7800 - 9200	8770 \pm 400	(3)	8150	(2)	8660 \pm 200	(14)	---	---
Mn	ug/g	165 \pm 6	(39)	164 \pm 6	(39)	165	155 - 178	162 \pm 6	(10)	163 \pm 5	(7)	165 \pm 6	(18)	170 \pm 12	(3) XRF
Mn	ug/g	---	(7)	---	(7)	---	---	---	---	---	---	---	---	188	(1) PAA
Mo	ng/g	---	(7)	300 \pm 80	(7)	300	200 - 420	---	---	360	(2)	275 \pm 95	(4)	---	(1) CB
N	%	5.9	(3)	5.6 \pm 0.3	(3)	5.62	5.31 - 6	---	---	---	---	---	---	5.62	(1) CB
Na	%	---	(17)	1.42 \pm 0.10	(17)	1.43	1.24 - 1.56	1.560	(2)	1.41 \pm 0.10	(8)	1.38 \pm 0.10	(7)	---	---
Nd	ng/g	---	(1)	306	(1)	---	---	---	---	306	(1)	---	---	---	---
Ni	ug/g	6	(24)	5.6 \pm 0.7	(24)	5.51	4.1 - 7.5	6.5 \pm 1.4	(3)	6.2 \pm 1.4	(4)	5.5 \pm 0.6	(13)	5.3	(2) XRF
Ni	ug/g	---	(24)	---	(24)	---	---	---	---	---	---	---	---	6.1	(1) PAA
P	ug/g	5500 \pm 200	(24)	5240 \pm 310	(24)	5300	4530 - 5700	5420 \pm 220	(4)	---	---	5160 \pm 310	(17)	5065	(2) COLOR
P	ug/g	---	(27)	---	(27)	---	---	---	---	---	---	---	---	---	---
Pb	ug/g	1.2 \pm 0.2	(27)	1.19 \pm 0.25	(27)	1.16	0.8 - 2	1.19 \pm 0.12	(17)	---	---	1.5 \pm 0.7	(6)	1.10 \pm 0.10	(4) ASV
Pb	ug/g	---	(27)	---	(27)	---	---	---	---	---	---	---	---	2.0	(1) PAA
Pd	ng/g	---	(27)	< 2	(27)	---	---	---	---	< 2	(27)	---	---	---	---
Pr	ng/g	---	(27)	< 60	(27)	---	---	---	---	< 60	(27)	---	---	---	---
Rb	ug/g	12.1 \pm 0.2	(6)	11.5 \pm 0.9	(6)	11.32	10 - 12.7	12.45	(2)	11.0 \pm 0.7	(4)	---	---	---	---
S	ug/g	---	(7)	4350 \pm 470	(7)	4440	3600 - 4860	---	---	---	---	4317	(2)	4320 \pm 530	(4) CB
Sb	ng/g	40	(7)	40 \pm 9	(7)	40	27 - 50	---	---	40 \pm 9	(7)	---	---	---	---
Sc	ng/g	160	(9)	166 \pm 11	(9)	170	150 - 180	---	---	166 \pm 11	(9)	---	---	---	---
Se	ng/g	---	(9)	40 \pm 14	(9)	37	24 - 66	33.95	(2)	48 \pm 19	(4)	---	---	37	(1) FLUOR
Si	ug/g	---	(1)	2900	(1)	---	---	---	---	---	---	2900	(1)	---	---
Sm	ng/g	---	(3)	56 \pm 24	(3)	54	33 - 80	---	---	56 \pm 24	(3)	---	---	---	---
Sn	ug/g	---	(1)	3.1	(1)	---	---	---	---	---	---	3.1	(1)	---	---
Sr	ug/g	87 \pm 2	(7)	80 \pm 5	(7)	82.5	72.5 - 87	85.35	(2)	83.4	(1)	77	(2)	72.5	(1) XRF
Ta	ug/g	---	(1)	0.23	(1)	---	---	---	---	0.23	(1)	---	---	---	---
Tb	ng/g	---	(1)	8	(1)	---	---	---	---	8	(1)	---	---	---	---
Th	ng/g	120 \pm 30	(2)	130	(2)	---	110 - 150	---	---	130	(2)	---	---	---	---
Ti	ug/g	---	(3)	18 \pm 10	(3)	16.5	8.9 - 28	---	---	---	---	---	---	---	---
Tl	ng/g	30	(1)	31	(1)	---	---	---	---	---	---	18 \pm 10	(3)	---	---
U	ng/g	46 \pm 9	(4)	46 \pm 3	(4)	45	42 - 48	---	---	46 \pm 3	(4)	---	---	---	31 (1) SSMS
V	ug/g	---	(12)	1.20 \pm 0.16	(12)	1.2	0.928 - 1.5	---	---	1.11 \pm 0.10	(7)	1.37 \pm 0.11	(3)	1.44	(1) COLOR
W	ng/g	---	(1)	140	(1)	---	---	---	---	140	(1)	---	---	---	---
Yb	ng/g	---	(2)	12.5	(2)	---	2 - 23	---	---	12.5	(2)	---	---	---	---
Zn	ug/g	50 \pm 2	(43)	50 \pm 4	(43)	50	42 - 60.1	52 \pm 4	(8)	49 \pm 5	(7)	49.3 \pm 2.5	(22)	60 \pm 7	(3) XRF
Zn	ug/g	---	(43)	---	(43)	---	---	---	---	---	(43)	---	---	49.2	(1) PAA
														49.5	(1) SSMS

TABLE 1570-1: COMPILED DATA FOR NBS SRM 1570 SPINACH (cont.)

COMPOUND	CAS #	UNITS	NBS	CONSENSUS Mean (n)
Total Folate	---	ug/g	---	5.3 (1)
Total Pantothenates	---	ug/g	---	14.3 (1)
Thiamine	---	ug/g	---	5.6 (1)
Protein	---	%	---	33.2 (1)
Nicotinic Acid	59676	ug/g	---	42.4 (1)
Vitamin B-6	65236	ug/g	---	12.1 (1)
Riboflavin	83885	ug/g	---	17.6 (1)

TABLE 1570-2: INDIVIDUAL DATA FOR NBS SRM 1570 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Total Folates (ug/g)</u>					<u>As (ng/g)</u>				
5.3			VV	85TAN 01	62	13	7	FAA	82HOE 02
<u>Total Pantothenates (ug/g)</u>					114			HAA	77IHN 01
14.3			VV	85TAN 01	120	10	7	RTNA	80GAL 02
<u>Thiamine (ug/g)</u>					120	70		ITNA	85NDI 01
5.6			VV	85TAN 01	140	10		AA	83RAP 01
<u>Protein (%)</u>					146			RTNA	85TIA 01
33.2			VV	85TAN 01	147	1		RTNA	79HOE 01
<u>Nicotinic acid (ug/g)</u>					149	25		RTNA	85GAU 04
42.4			VV	85TAN 01	150	10	11	HAA	82JON 01
<u>Vitamin B-6 (ug/g)</u>					150	13	7	FAA	82HOE 02
12.1			VV	85TAN 01	152	5	7	FAA	82HOE 02
<u>Riboflavin (ug/g)</u>					160			FAA	78CAP 01
17.6			VV	85TAN 01	160	10	11	HAA	82JON 01
<u>Ag (ng/g)</u>					170	10	H	ICPES	82HAH 01
65	10		RTNA	80SLO 01	170	10		COLOR	77BUR 01
65	40		AA	80JAC 01	170	20		FAA	80DUP 01
<u>Al (ug/g)</u>					170	40		RTNA	80SLO 01
366	48	11	ICPES	81MUN 01	180	20		HAA	80TAM 01
402.6	23.2	6	COLOR	85BAR 01	180	70		IENA	82GLA 02
412.7	24.8	6	COLOR	85BAR 01	<u>Au (ng/g)</u>				
482			ICPES	78CAP 01	0.4			RTNA	80SLO 01
536			ICPES	81GOO 01	2	0.0004		ITNA	79REN 03
609	16	11	ICPES	81MUN 01	<u>B (ug/g)</u>				
620	36		ICPES	83SCH 03	20.9	0.3		ICPES	79HER 01
782	31	11	ICPES	82JON 01	27	3.5		ICPES	84PRI 01
819	30		ICPES	84ABD 01	27.2	0.8	11	ICPES	81MUN 01
820	25		ITNA	84GLA 02	27.6	1.3	11	ICPES	81MUN 01
824	10		ITNA	80SLO 01	28	0.4		TCGS	82GLA 02
829	23		ITNA	77NAD 02	28.5			ICPES	81GOO 01
854	25		ICPES	83SCH 04	<u>Ba (ug/g)</u>				
861	30		AA	83RAP 01	<	45	L	ITNA	78CAP 01
865	47		ICPES	84NAD 01	13.1	1.8		ITNA	77NAD 02
870			ITNA	84GLA 11	13.9	0.7		ICPES	85WHI 02
881			ITNA	78CAP 01	17.8	2		ICPES	84NAD 01
909	11		IENA	85GLA 02	87	29		ITNA	79REN 03
1190		35	ITNA	81GLA 03	<u>Be (ng/g)</u>				
					<	30	L	ICPES	82KUE 01
					<	30	L	ICPES	82KUE 01
					<	30	L	ICPES	82KUE 01
					<	60	L	ICPES	78CAP 01
					<	80		ICPES	84WOL 02
					16	6		ICPES	83SCH 03

TABLE 1570-2: INDIVIDUAL DATA FOR NBS SRM 1570 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Bi (ng/g)</u>					<u>Ca (%) cont.</u>				
<	8	L	ICPES	82HAH 01	1.49	0.1		ITNA	77NAD 02
					1.54	0.01		ICPES	79HER 01
					1.62			ICPES	78CAP 01
					1.78	0.25		ITNA	79REN 03
					2.45			EXRF	81PAR 01
<u>Br (ug/g)</u>					<u>Cd (ug/g)</u>				
42.4	2.4	5	ITNA	80HOE 01	1.2			FAA	80PRE 01
43.6	2.3	5	IENA	79GLA 02	1.2	0.05		FAA	84KUR 01
45			ITNA	84GLA 11	1.2	0.15		ASV	82GAJ 01
45	3.3		ITNA	80SLO 01	1.23	0.16		ASV	82SAT 02
45.1	0.3	5	IENA	79GLA 02	1.3			FAA	82PRE 01
46	2	5	ITNA	80HOE 01	1.3	0.05		AA	83RAP 01
47	4		ITNA	84GLA 02	1.3	0.2	11	ICPES	81MUN 01
47.2	0.5		ITNA	77NAD 02	1.32			ASV	78CAP 01
48			ITNA	78CAP 01	1.38	0.08		RTNA	80SLO 01
48	9.4		ITNA	79REN 03	1.39	0.11		ICPES	82EVA 01
51.1	2.5		CPXRF	84BIS 01	1.4	0.08	11	ICPES	82JON 01
52	4.8		ITNA	79KOB 03	1.4	0.1		ICPES	83SCH 04
54	3	35	NAA	81GLA 03	1.4	0.1		ICPES	84ABD 01
55.3	3.8	5	ITNA	80TOU 01	1.4	0.14		AA	82EVA 01
138			EXRF	81PAR 01	1.4	0.2		ICPES	83SCH 03
<u>C (%)</u>					1.41	0.03	6	ICPES	82KUE 01
40.7	1		CB	77WAT 02	1.42	0.03	6	ICPES	82KUE 01
40.82	0.81		CB	80SCH 02	1.45	0.07	6	ICPES	82KUE 01
<u>Ca (%)</u>					1.46	0.02		NAA	76DER 01
0.82	0.11		ITNA	80SLO 01	1.46	0.04		FAA	80LEG 01
0.85	0.01		CPXRF	84BIS 01	1.47	0.12		FAA	83DEL 01
0.99	0.05		ICPES	84ABD 01	1.48			RTNA	85TIA 01
1.19	0.09	6	EXRF	79MAT 01	1.49	0.08	11	ICPES	82JON 01
1.21		35	AA	81GLA 04	1.5	0.3		AA	84KAN 01
1.22	0.02		ICPES	84WOL 02	1.52	0.07		RTNA	77DER 01
1.24	0.08	11	ICPES	82JON 01	1.6	0.2		FAA	81KNA 01
1.25	0.01	11	ICPES	82JON 01	1.67	0.29		SSMS	77PAU 01
1.29	0.03	6	ICPES	82KUE 01	1.7	0.1		RTNA	76GAL 01
1.29	0.04	11	ICPES	81MUN 01	1.7	0.2	D	FAA	80SCH 08
1.3			ICPES	81GOO 01	1.7	0.2		AA	80SCH 05
1.34	0.07		ICPES	85WHI 02	1.7	0.3	11	ICPES	81MUN 01
1.34	0.23		ICPES	84NAD 01	2	0.1		AA	76GAL 01
1.347	0.014		NM	81YUZ 01	2.1	0.2		ICPES	79HER 01
1.35	0.025	6	ICPES	82KUE 01	2.2	1	11	ICPES	82JON 01
1.35	0.06	11	ICPES	81MUN 01	2.8	0.1	11	ICPES	82JON 01
1.36	0.04	11	ICPES	82JON 01	<u>Ce (ng/g)</u>				
1.37	0.07	5	ITNA	80TOU 01	240	30		RTNA	80SLO 01
1.38	0.014	6	ICPES	82KUE 01	671	162		RTNA	83TJI 01
1.39	0.03	11	ICPES	82JON 01					
1.4	0.04	6	EXRF	79MAT 01					
1.44	0.035		ICPES	83SCH 03					
1.46			ITNA	78CAP 01					

TABLE 1570-2: INDIVIDUAL DATA FOR NBS SRM 1570 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Cl (ug/g)</u>					<u>Cr (ug/g) cont.</u>				
6000		35	ITNA	81GLA 04	4.7	0.3		DCPES	79REE 01
6290			ITNA	78CAP 01	4.7	0.3	D	DCPES	81REE 01
6500	300		CPXRF	79REM 02	4.7	0.4		ITNA	82GLA 02
6800	100		ITNA	80SLO 01	4.8			ITNA	78CAP 01
7000			ITNA	84GLA 11	5.2	0.5		ITNA	76GAL 01
7000	120		ITNA	84GLA 02	5.2	1.5		AE+AF	82GOL 01
10000	1000		ITNA	77NAD 02	5.8	0.2		AA	76GAL 01
					6	0.7		PAA	80YAM 01
					6.2	0.1		ICPES	79HER 01
					7.5	1.6		ITNA	79REN 03
0.9	0.1		PAA	80YAM 01	20.5	2.8	11	RTNA	76STE 01
1.41			ITNA	78CAP 01	21	2		RTNA	77MEL 01
1.42	0.1		AA	83RAP 01	21.3	2.6	11	RTNA	76STE 01
1.47	0.1		AA	80JAC 01	21.8	1.5	11	RTNA	76STE 01
1.49	0.05		RTNA	80SLO 01	23.9	0.9	11	RTNA	76STE 01
1.5	0.1		ITNA	79KOB 03	24.5	1.2	11	RTNA	76STE 01
1.5	0.2		ITNA	79REN 03	24.8	2.8		ITNA	76STE 01
1.5	0.4		ICPES	84ABD 01					
1.6	0.1	5	ITNA	80TOU 01	<u>Cs (ng/g)</u>				
1.65			FAA	82HOE 01					
1.68	0.03		RTNA	77MEL 01	< 200		L	ITNA	82GLA 02
1.7	0.1		ITNA	76GAL 01	48	5		ITNA	77NAD 02
1.76	0.01		ITNA	77NAD 02	63	3		ITNA	84GLA 11
3.2	0.2		AA	76GAL 01	64	2		ITNA	84GLA 02
					68	8		ITNA	85GAU 04
					270	40		RTNA	77MEL 01
					320	40		ITNA	79REN 03
<u>Cr (ug/g)</u>					<u>Cu (ug/g)</u>				
1.9	0.3	11	ICPES	81MUN 01					
2.0			ICPES	81GOO 01					
3.06	0.3		AA	80JAC 01					
3.33	0.74		ICPES	84NAD 01	< 20			ITNA	84GLA 11
3.5	0.3	6	ICPES	82KUE 01	5.3	1.3		ITNA	85NDI 01
3.54	0.3	6	ICPES	82KUE 01	9.1	0.4		AA	76GAL 01
3.6	0.5	11	ICPES	82JON 01	9.5			ICPES	81GOO 01
3.7	1.2	11	ICPES	81MUN 01	10.2	1		ICPES	82EVA 01
3.75		11	AA	79HOE 02	10.5	0.3	11	ICPES	81MUN 01
3.9			POL	83HOL 01	10.6	0.9		CPXRF	84BIS 01
4.0	0.34		ITNA	85NDI 01	10.7	0.5		ICPES	83SCH 03
4.2	0.7		ICPES	83SCH 03	10.8			ASV	83HOL 01
4.3	0.5		ITNA	77NAD 02	10.9	0.3	11	ICPES	82JON 01
4.3	0.7	6	ICPES	82KUE 01	10.9	0.6		RTNA	80SLO 01
4.4		11	AA	79HOE 02	11.0	0.2	7	RTNA	80GAL 02
4.4			FAA	82HOE 01	11.0	0.2		AA	83RAP 01
4.4	0.2		ICPES	84ABD 01	11.1	0.2	11	ICPES	82JON 01
4.47	0.4		FAA	83CAR 02	11.1	0.5	11	ICPES	82JON 01
4.5	0.2		RTNA	76GAL 01	11.1	0.5	11	ICPES	81MUN 01
4.5	0.3		ITNA	79KOB 03	11.2	0.4	11	ICPES	82JON 01
4.51		11	AA	79HOE 02	11.4	0.5		RTNA	79KOB 01
4.6	0.2	11	ICPES	82JON 01	11.5	0.4		FAE	76EPS 01
4.7	0.15		AA	83RAP 01	11.5	0.5		SSMS	77PAU 01

TABLE 1570-2: INDIVIDUAL DATA FOR NBS SRM 1570 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Cu (ug/g) cont.</u>					<u>Fe (ug/g)</u>				
11.6	0.3		ICPES	84WOL 02	178	2		DCPES	81REE 01
11.6	0.7		ITNA	79KOB 03	384	79	11	ICPES	81MUN 01
11.6	0.7		RTNA	78KOB 01	470	50	6	ICPES	82KUE 01
11.8	0.3		RTNA	77DER 01	478			ICPES	78CAP 01
11.8	0.3	6	ICPES	82KUE 01	491	20	11	ICPES	82JON 01
11.8	2.5		VV	80SCH 05	494			FAA	78CAP 01
12.0			RTNA	85TIA 01	500	26	6	FAA	84FUD 02
12.0	0.2		IDMS	84BRO 03	506	34		CPXRF	84BIS 01
12.0	0.3	6	ICPES	82KUE 01	508	14		ICPES	83SCH 03
12.0	0.5		ICPES	80SCH 08	510			ITNA	78CAP 01
12	1	2	FAA	84MIL 01	511	7		ICPES	79HER 01
12	1	2	FAA	84MIL 01	516	36		ICPES	84NAD 01
12.06	0.03		COLOR	77BUR 01	518	8	11	ICPES	82JON 01
12.1			AA	80EVA 01	522	14	11	COLOR	82SCH 03
12.1	0.1		COLOR	76EPS 01	525	11	6	EXRF	79MAT 01
12.1	0.2		ICPES	79HER 01	527	30		ICPES	84ABD 01
12.1	0.4		AA	82EVA 01	530	11	6	ICPES	82KUE 01
12.14	0.61		RTNA	85DYB 01	540	10	6	ICPES	82KUE 01
12.2	0.1	6	ICPES	82KUE 01	540	18	D	ICPES	80SCH 08
12.2	0.3		AA	85KOJ 01	540	18		ICPES	80SCH 05
12.3			ICPES	78CAP 01	540	23		ITNA	79KOB 03
12.3		11	AA	79HOE 02	541	15	11	ICPES	82JON 01
12.6			FAA	78CAP 01	545			AA	80EVA 01
12.6	0.2		ICPES	83SCH 04	548	9		NM	80SUZ 01
12.6	1.4	6	EXRF	79MAT 01	551		11	AA	79HOE 02
12.7	0.4		AA	76EPS 01	552	10	6	FAA	84FUD 02
13	0.4		ICPES	84ABD 01	556			ICPES	81GOO 01
13	1	D	DCPES	81REE 01	556	11	11	COLOR	82SCH 03
13	1		DCPES	79REE 01	556	15	2	FAA	84MIL 01
13.2		11	AA	79HOE 02	557	8		ITNA	79DAS 01
18	3		ICPES	84NAD 01	557	8		RTNA	80SLO 01
<u>Eu (ng/g)</u>					557	19	11	ICPES	82JON 01
<	200	L	ITNA	78CAP 01	558	12	2	FAA	84MIL 01
11	1		RTNA	83TJI 01	562	25		AA	83RAP 01
14	1		ITNA	79KOB 03	566	18		ITNA	77NAD 02
20	1		ITNA	77NAD 02	570		11	AA	79HOE 02
<u>F (ug/g)</u>					576	18	11	ICPES	81MUN 01
4.3	0.4		ISE	83KNA 01	597	6	6	EXRF	79MAT 01
4.4	0.3		ISE	84GLA 02	600	90	35	ITNA	81GLA 03
					601	12		ICPES	84WOL 02
					660	300		ITNA	79REN 03
					763	34		RTNA	77MEL 01
					1200			EXRF	81PAR 01
					<u>Gd (ng/g)</u>				
					60	21		RTNA	83TJI 01

TABLE 1570-2: INDIVIDUAL DATA FOR NBS SRM 1570 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ge (ng/g)</u>					<u>K (%) cont.</u>				
<	20	L	ICPES	82HAH 01	3.53	0.032	6	ICPES	82KUE 01
					3.54			ITNA	80EDD 01
<u>H (%)</u>					3.56		1	AA	78SZY 01
5.54	0.08		CB	80SCH 02	3.57	0.04	6	ICPES	82KUE 01
5.6	0.1	35	TCGS	79GLA 04	3.57	0.29	2	FAA	84MIL 01
					3.58	0.06		ICPES	84ABD 01
<u>H2O (%)</u>					3.59			ICPES	79COO 01
6			VV	85TAN 01	3.6	0.06		ICPES	85WHI 02
					3.6	0.09		ITNA	79KOB 03
<u>Hf (ng/g)</u>					3.6	0.2	11	ICPES	82JON 01
					3.61		1	AA	78SZY 01
40	20		RTNA	80SLO 01	3.61	0.35		ITNA	82EHM 01
					3.65	0.21		ICPES	84WOL 02
<u>Hg (ng/g)</u>					3.7	0.04	11	ICPES	82JON 01
					3.7	0.1	11	ICPES	82JON 01
25		11	CVAA	79HOE 02	3.73			ITNA	78CAP 01
26	8		RTNA	80SLO 01	3.74	0.07		ITNA	80SLO 01
29			CVAA	83MAR 05	3.9	0.1	11	ICPES	82JON 01
30	5		CVAA	82GLA 02	4.02	0.08		CPXRF	84BIS 01
33	16		CVAA	82DOO 01	4.04	0.06	6	EXRF	79MAT 01
34	3		ITNA	77NAD 02	4.85	0.05	6	EXRF	79MAT 01
110	20		RTNA	77MEL 01	7.95			EXRF	81PAR 01
<u>I (ug/g)</u>					<u>La (ng/g)</u>				
1.08	0.04		MS	85SCH 01	260	50		RTNA	80SLO 01
1.08	0.16		IENA	82SAT 01	315			NM	83KAT 01
1.1	0.2		PAA	77WIL 01	320	30		ITNA	77NAD 02
1.267	0.054	35	RTNA	81ALL 01	350	10		NM	85KAT 02
1.325	0.055		RTNA	81STR 01	350	60		ITNA	79REN 03
1.325	0.055	34	RTNA	81ALL 01	361	89		RTNA	83TJI 01
<u>In (ng/g)</u>					400	50		ITNA	85KAT 02
1.2	0.1		RTNA	78KOB 01	<u>Li (ug/g)</u>				
1.3	0.2		RTNA	79KOB 01	1.93	0.06		ICPES	84NAD 01
<u>K (%)</u>					2.04	0.01		AA	85EVA 01
2.58	0.09	11	ICPES	81MUN 01	<u>Lu (ng/g)</u>				
3.09	0.54		ICPES	84NAD 01	<	5	L	RTNA	80SLO 01
3.26	0.23		ITNA	79REN 03	3	1		RTNA	83TJI 01
3.29	0.09	2	FAA	84MIL 01					
3.29	0.18		ICPES	79HER 01					
3.43	0.11		ITNA	77NAD 02					
3.44	0.2	11	ICPES	81MUN 01					
3.46			ITNA	84GLA 11					
3.52	0.1	6	ICPES	82KUE 01					

TABLE 1570-2: INDIVIDUAL DATA FOR NBS SRM 1570 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Mg (ug/g)</u>					<u>Mn (ug/g) cont.</u>				
6990			ICPES	81GOO 01	165	3	6	EXRF	79MAT 01
7000			ICPES	78CAP 01	165	8	2	FAA	84MIL 01
7300	500		ITNA	80SLO 01	165	10		ICPES	85WHI 02
7800	200		ICPES	84ABD 01	166	1		ICPES	79HER 01
8300	800		ICPES	84NAD 01	166	5	11	ICPES	82JON 01
8340	130		ICPES	84WOL 02	167	5		ICPES	83SCH 03
8400			FAA	78CAP 01	167	6	11	ICPES	82JON 01
8500	120	11	ICPES	81MUN 01	167	7		ICPES	82EVA 01
8550	65	6	ICPES	82KUE 01	168	3	D	ICPES	80SCH 08
8600	230	6	ICPES	82KUE 01	168	3		VV	80SCH 05
8600	400	11	ICPES	82JON 01	168	4		AA	83RAP 01
8600	500		ICPES	85WHI 02	168	6		ICPES	83SCH 04
8700	100		ICPES	79HER 01	169	4		ITNA	80SLO 01
8700	500	2	FAA	84MIL 01	170			AA	80EVA 01
8790	150	6	ICPES	82KUE 01	170	4		AA	82EVA 01
8800	100	11	ICPES	82JON 01	171			ITNA	78CAP 01
8800	270		ICPES	83SCH 03	171	1	6	ICPES	82KUE 01
8833	299	11	ICPES	81MUN 01	172	5	6	ICPES	82KUE 01
8900	300	11	ICPES	82JON 01	173	3		ICPES	84NAD 01
9000	200	11	ICPES	82JON 01	176	2	11	ICPES	81MUN 01
9000	600		ITNA	78CAP 01	178	2		DCPES	79REE 01
9200	300	2	FAA	84MIL 01	184	10	6	EXRF	79MAT 01
9800			ITNA	77NAD 02	185			ICPES	81GOO 01
					187.9	18.9		PAA	80YAM 01
					200			ITNA	79REN 03
					684			EXRF	81PAR 01
<u>Mn (ug/g)</u>					<u>Mo (ng/g)</u>				
1.3	0.1		DCPES	81REE 01					
49	2	11	ICPES	82JON 01	200	100	11	ICPES	82JON 01
102	3		AA	76GAL 01	200	100	11	ICPES	82JON 01
118	3		ITNA	76GAL 01	300	41		COLOR	85EVA 02
146	32		AE+AF	82GOL 01	300	100	11	ICPES	82JON 01
155			FAA	78CAP 01	300	100		RTNA	80SLO 01
156		11	AA	79HOE 02	400	200	11	ICPES	82JON 01
156	4		ICPES	84ABD 01	420			RTNA	85TIA 01
156	5		ITNA	79KOB 03					
157			ICPES	78CAP 01					
157	5	6	FAA	84FUD 02					
157	13	11	ICPES	81MUN 01					
158	7	11	ICPES	82JON 01					
158	13	2	FAA	84MIL 01	5.31			VV	85TAN 01
159		11	AA	79HOE 02	5.62	0.11		CB	80SCH 02
160		35	ITNA	81GLA 04	6	0.4	35	TCGS	79GLA 04
160	3	11	ICPES	82JON 01					
160	3		ICPES	84WOL 02					
161	6		ITNA	77NAD 02					
162	4	6	FAA	84FUD 02					
162	7		CPXRF	84BIS 01					
162	9		ITNA	84GLA 02					
164			ITNA	84GLA 11					
165	3	6	ICPES	82KUE 01					

TABLE 1570-2: INDIVIDUAL DATA FOR NBS SRM 1570 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
Na (%)					P (ug/g)				
1.13	0.02		ITNA	80SLO 01	4100	200		ICPES	84NAD 01
1.24	0.21		ICPES	84NAD 01	4500			ICPES	78CAP 01
1.28	0.1		ITNA	82SCH 05	4530	120	11	COLOR	84LIN 01
1.29	0.11	11	ICPES	81MUN 01	4600	100		ICPES	84ABD 01
1.31	0.07		ITNA	77NAD 02	4814	300		ICPES	84PRI 01
1.33	0.03	11	ICPES	81MUN 01	4865			ICPES	81GOO 01
1.33	0.05		ITNA	79KOB 03	5082	192	11	ICPES	81MUN 01
1.41			ICPES	81GOO 01	5100			FAA	79EDI 01
1.42	0.02		ICPES	84WOL 02	5100	120		ICPES	84WOL 02
1.43			ITNA	84GLA 02	5100	200		CPAA	83MAS 02
1.43	0.03		ICPES	84ABD 01	5120	60	11	ICPES	81MUN 01
1.44			ITNA	78CAP 01	5200	200	11	ICPES	82JON 01
1.48		35	ITNA	81GLA 04	5240	70	6	ICPES	82KUE 01
1.5			ITNA	84GLA 11	5300	70	6	ICPES	82KUE 01
1.54	0.14		ITNA	79REN 03	5300	100	11	ICPES	82JON 01
1.547	0.021		ICPES	85WHI 02	5300	300		ICPES	85WHI 02
1.55		1	AA	78SZY 01	5350	45	6	ICPES	82KUE 01
1.56		1	AA	78SZY 01	5360	270		ICPES	81OWE 01
					5400			ICPES	79EDI 01
Nd (ng/g)					5500	200	11	ICPES	82JON 01
306	73		RTNA	83TJI 01	5500	300	14	FAA	84LIN 01
					5500	500	14	AA	84LIN 01
Ni (ug/g)					5600	100	11	COLOR	84LIN 01
1.3	0.1		DCPES	79REE 01	5600	300	14	FAA	84LIN 01
2.3	0.5		RTNA	80SLO 01	5600	400	7	NM	81SHI 01
4.1	0.5		ITNA	77NAD 02	5700	200	11	ICPES	82JON 01
4.8	0.7		ICPES	82EVA 01	6000	100		ICPES	79HER 01
4.9	0.2	11	ICPES	82JON 01					
5	7		ICPES	84WOL 02	Pb (ug/g)				
5.1	0.1	11	ICPES	82JON 01					
5.1	0.4	11	ICPES	81MUN 01	0.8	0.1	11	ICPES	82JON 01
5.12			VOLT	81PIH 01	0.8	0.3	11	ICPES	82JON 01
5.2	0.3		CPXRF	84BIS 01	1.0	0.1		FAA	80LEG 01
5.4	0.1	11	ICPES	82JON 01	1.0	0.8		ICPES	79HER 01
5.4	0.1	11	ICPES	82JON 01	1.02			FAA	82HOE 01
5.4	1	6	EXRF	79MAT 01	1.03	0.15		ASV	82GAJ 01
5.5	0.5		ICPES	83SCH 03	1.04	0.09		ASV	80SZY 01
5.51	0.32	6	ICPES	82KUE 01	1.09	0.06		FAA	79DAB 02
5.6	0.3		AA	83RAP 01	1.1		11	FAA	79HOE 02
5.7	0.3	11	ICPES	81MUN 01	1.1	0.06		AA	82EVA 01
5.8	0.2		AA	82EVA 01	1.1	0.08		ASV	82SAT 02
6.03	0.52	6	ICPES	82KUE 01	1.1	0.1		AA	80SCH 05
6.1	0.2		PAA	80YAM 01	1.1	0.1	D	FAA	80SCH 08
6.17	0.72	6	ICPES	82KUE 01	1.1	0.2		FAA	81KNA 01
6.4			POL	83HOL 01	1.12	0.03		SSMS	77PAU 01
6.5	0.2		RTNA	78KOB 01	1.16	0.08		FAA	82RAI 01
6.5	0.3		RTNA	79KOB 01	1.18	0.12		AA	84STO 01
6.7	0.8		ICPES	84ABD 01	1.2			FAA	80PRE 01
7.5	0.5		RTNA	77MEL 01	1.25			ASV	78CAP 01
8.1			FAA	82HOE 01	1.25	0.2		AA	83RAP 01
8.1	0.2		ICPES	79HER 01					

TABLE 1570-2: INDIVIDUAL DATA FOR NBS SRM 1570 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Pb (ug/g) cont.</u>					<u>Sb (ng/g)</u>				
1.3			FAA	82PRE 01	14	3	H	ICPES	82HAH 01
1.3		6	FAA	81HIN 01	27	6		ITNA	77NAD 02
1.3		6	FAA	82KOI 01	31	1		RTNA	80KOS 02
1.3	0.4		HAA	82WEI 01	38	3		RTNA	79HOE 01
1.4		6	FAA	82KOI 01	40	10	7	RTNA	80GAL 02
1.4		6	FAA	81HIN 01	44	2		ITNA	79KOB 03
1.75	1.33		ICPES	82EVA 01	50			ITNA	78CAP 01
2.0	1.4		PAA	80YAM 01	50	20		RTNA	80SLO 01
2.2	0.6		ICPES	83SCH 03	690	150		ITNA	79REN 03
2.5	0.4		ICPES	84ABD 01	<u>Sc (ng/g)</u>				
3.1	1.6	11	ICPES	81MUN 01	150	30	5	ITNA	80TOU 01
3.4	0.6		AA	84KAN 01	153	6		ITNA	86GAU 01
4.4	3.1	11	ICPES	81MUN 01	159	12		ITNA	84GLA 11
<u>Pd (ng/g)</u>					160			ITNA	78CAP 01
<	2	L	RTNA	81BYR 01	170			ITNA	80EDD 01
<u>Pr (ng/g)</u>					170	4		ITNA	77NAD 02
<	60	L	RTNA	80SLO 01	170	20		RTNA	80SLO 01
<u>Rb (ug/g)</u>					180	10		ITNA	79KOB 03
10			ITNA	78CAP 01	180	20		RTNA	77MEL 01
11	1	35	ITNA	81GLA 03	470	40		ITNA	79REN 03
11.32	3.1		ITNA	79REN 03	<u>Se (ng/g)</u>				
11.6	0.3		ITNA	77NAD 02	24	10	9	ITNA	80WAN 01
12.2	0.7		FAA	83GRO 02	25			FAA	78CAP 01
12.7	0.47		AA	85EVA 01	33	3	11	GC	81UCH 02
17	3		RTNA	77MEL 01	33	3	11	GC	81UCH 02
39			EXRF	81PAR 01	37			FLUOR	79WAT 02
<u>S (ug/g)</u>					40	10		RTNA	80KNA 01
2400	600		CPXRF	79REN 02	42.9			HAA	771HN 01
3600	500		CB	84GLA 11	60	20		RTNA	80SLO 01
3834	58		ICPES	84PRI 01	66	9		ITNA	77NAD 02
4400	400		CB	86BOW 01	360	20		FAA	82JUL 01
4440		D	CB	85JAC 01	400	110		HAA	82JUL 01
4440	60	6	CB	84JAC 01	510	80		RTNA	82POL 01
4500	270		WXRf	86BOW 01	<u>Si (ug/g)</u>				
4800	200		ICPES	85WHI 02	2900	900		ICPES	84NAD 01
4860		D	CB	85JAC 01	<u>Sm (ng/g)</u>				
4860	160	6	CB	84JAC 01	33	4	5	ITNA	80TOU 01
					54	21		RTNA	83TJI 01
					80	20		RTNA	80SLO 01
					200	140		ITNA	79REN 03

TABLE 1570-2: INDIVIDUAL DATA FOR NBS SRM 1570 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Sn (ug/g)</u>					<u>V (ug/g)</u>				
<	0.02	L	ICPES	82HAH 01	0.928	0.0013	11	RTNA	82HEY 02
3.1			ICPES	78CAP 01	1.06	0.17		ITNA	77NAD 02
					1.08	0.07	D	DCPES	81REE 01
<u>Sr (ug/g)</u>					1.08	0.07		DCPES	79REE 01
72.5	3.4		CPXRF	84BIS 01	1.093	0.085		ITNA	82HEY 02
75	1		ICPES	84NAD 01	1.13	0.01		RTNA	78BYR 01
79	1		ICPES	79HER 01	1.13	0.018	11	RTNA	82HEY 02
82.5	15.8		AE+AF	82GOL 01	1.2	0.06		ITNA	76GAL 01
83.4	0.2		IENA	85GAU 04	1.207	0.0031	11	RTNA	82HEY 02
83.7	0.7		AA	85GAU 04	1.28	0.07	11	ICPES	82JON 01
87	8		AA	85EVA 01	1.34	0.06	11	ICPES	82JON 01
208			EXRF	81PAR 01	1.44			COLOR	85EVA 02
					1.5	0.2		ICPES	83SCH 03
					1.7			ITNA	78CAP 01
<u>Ta (ug/g)</u>					<u>W (ng/g)</u>				
0.23	0.08		ITNA	79REN 03	140	50		RTNA	80SLO 01
<u>Tb (ng/g)</u>					<u>Yb (ng/g)</u>				
8	1		RTNA	83TJI 01	2	1		RTNA	80SLO 01
<u>Th (ng/g)</u>					23	2		RTNA	83TJI 01
110	10		ITNA	77NAD 02	<u>Zn (ug/g)</u>				
150	40		RTNA	80SLO 01	42	2		RTNA	80SLO 01
<u>Ti (ug/g)</u>					43.1	4		ICPES	82EVA 01
8.9	1.4		ICPES	83SCH 03	45.9	2.8		RTNA	77DER 01
16.5			ICPES	78CAP 01	46	1	11	ICPES	82JON 01
28	2		ICPES	84NAD 01	46	2	11	ICPES	82JON 01
<u>Tl (ng/g)</u>					46.2	0.6	11	ICPES	82JON 01
31	5		SSMS	77PAU 01	46.7		11	AA	79HOE 02
<u>U (ng/g)</u>					47	0.48		ITNA	79REN 03
42			DNA	84GLA 02	47	1.2		ICPES	84WOL 02
45	0.8	35	DNA	80GLA 04	47	2	2	FAA	84MIL 01
47	5		DNA	86GAU 01	47	2.5		ICPES	83SCH 03
48	2		DNA	85GAU 04	47	4		ICPES	84ABD 01
69	120	R	DNA	81GLA 03	48			ICPES	78CAP 01
					48			ITNA	78CAP 01
					48	1	11	ICPES	82JON 01
					48	2	11	ICPES	82JON 01
					48	3	11	ICPES	82JON 01
					48	3	D	ICPES	80SCH 08
					48	3		ICPES	80SCH 05
					48.9	4.6	11	ICPES	81MUN 01
					49.2	0.1		PAA	80YAM 01
					49.5	0.7		SSMS	77PAU 01
					49.8	1.3	6	ICPES	82KUE 01

TABLE 1570-2: INDIVIDUAL DATA FOR NBS SRM 1570 (cont.)

Conc	Uncer	Com	Method	Reference	
<u>Zn (ug/g) cont.</u>					
50			ICPES	81G00 01	
50	1		ITNA	77NAD 02	
50	3		ICPES	85WHI 02	
50.6	1.3	6	ICPES	82KUE 01	
50.8			AA	80EVA 01	
50.8	1.9		AA	82EVA 01	
51	2		ICPES	84NAD 01	
51.2	0.6	6	ICPES	82KUE 01	
52	1		DCPES	79REE 01	
52	1	D	DCPES	81REE 01	
52	2.2		ITNA	79KOB 03	
52	3		AA	83RAP 01	
52.6	2.5	11	ICPES	81MUN 01	
52.9	2.2	6	EXRF	79MAT 01	
53		11	AA	79HOE 02	
53	3	11	ICPES	82JON 01	
54	1		ICPES	79HER 01	
54	3		ICPES	83SCH 04	
55	2	2	FAA	84MIL 01	
57	8		RTNA	77MEL 01	
59.7			FAA	78CAP 01	
60.1	2	6	EXRF	79MAT 01	
66.8	8		CPXRF	84BIS 01	
72.5	1.6		RTNA	76GAL 01	
72.8	1.3		AA	76GAL 01	
119			EXRF	81PAR 01	

TABLE 1571-1: COMPILED DATA FOR NBS SRM 1571 ORCHARD LEAVES (revised 3/1/86)

ELE	UNITS	NBS Mean ± SD	CONSENSUS Mean ± SD (n)	MEDIAN	RANGE	AA Mean ± SD (n)	NAA Mean ± SD (n)	ICPES Mean ± SD (n)	XRF Mean ± SD (n)	OTHER METHODS		Mean (n) Method
										Mean ± SD (n) Method	Mean ± SD (n) Method	
Ag	ng/g	---	320 (2)	---	13 - 620	---	316.5 (2)	---	---	---	---	---
Al	ug/g	---	323 ± 112 (51)	347	123 - 520	455 (2)	400 ± 60 (19)	241 ± 98 (11)	488 (1)	210 ± 50 (9)	OES (1) CPAA (1)	347 (2) POL
Al	ug/g	---	---	---	---	---	---	---	---	405 (1)	SSMS (1)	144 (2) COLOR
As	ug/g	10 ± 2	10.7 ± 1.3 (179)	10.3	8 - 14.3	11 ± 2 (11)	10.8 ± 1.5 (77)	10.8 ± 1.5 (14)	13.0 ± 2.5 (14)	10.1 ± 1.2 (5)	PAA (5) PAA (1)	11.9 (1) FAE
As	ug/g	---	---	---	---	---	---	---	---	10 (1)	NPOES (1)	---
As	ug/g	---	---	---	---	---	---	---	---	9.8 (1)	ESCA (1)	11.5 (1) GCHES
As	ug/g	---	---	---	---	---	---	---	---	11 (1)	ICFMS (1)	15 (2) CPAA
As	ug/g	---	---	---	---	---	---	---	---	12 (1)	AE±AF (1)	10.37 (2) ASV
As(III)	ug/g	---	4.9 (1)	---	---	---	---	---	---	---	---	---
Au	ng/g	---	1.4 ± 0.4 (18)	1.4	0.72 - 2	---	1.4 ± 0.4 (18)	---	---	---	---	---
B	ug/g	33 ± 3	33 ± 3 (36)	33	25.15 - 40	33.5 (2)	---	33 ± 4 (11)	---	32 ± 5 (11)	OES (3) COLOR (3)	23.8 (2) AE±AF
B	ug/g	---	---	---	---	---	---	---	---	32.6 ± 0.7 (5)	TCGS (6)	31.2 (1) NM
Ba	ug/g	44	43 ± 4 (46)	43	35 - 52	47.15 (2)	41 ± 6 (22)	43 ± 5 (10)	36.95 (2)	44 ± 5 (6)	SSMS (5)	51.3 (1) PAA
Be	ng/g	27 ± 10	24 ± 8 (7)	26	13.7 - 36	31 (2)	---	16 ± 3 (3)	---	---	---	---
Bi	ng/g	100	90 ± 40 (9)	100	30 - 160	44 ± 18 (3)	---	---	---	---	---	---
Br	ug/g	10	9.5 ± 1.1 (53)	9.4	7.1 - 12	---	9.7 ± 1.2 (43)	---	8.4 ± 1.3 (13)	160 (1)	AF (1)	110 (3) POL
C	%	---	46.1 ± 0.5 (6)	45.8	45.6 - 47	---	---	---	---	---	---	---
Ca	%	2.09 ± 0.03	2.04 ± 0.12 (92)	2.04	1.74 - 2.29	1.99 ± 0.16 (10)	2.07 ± 0.16 (22)	2.05 ± 0.08 (21)	1.99 ± 0.15 (15)	2.05 ± 0.11 (4)	PAA (4)	2.16 (2) CPAA
Ca	%	---	---	---	---	---	---	---	---	1.98 ± 0.12 (3)	14NAA (1)	1.69 (1) AF
Ca	%	---	---	---	---	---	---	---	---	2.13 (1)	SSMS (3)	2.05 (2) TCGS
Cd	ng/g	110 ± 10	119 ± 22 (86)	120	70 - 190	123 ± 35 (47)	130 ± 40 (17)	152 ± 42 (12)	---	110 (1)	PAA (1) ASV (5)	100 (1) POL
Cd	ng/g	---	---	---	---	---	---	---	---	100 (1)	SSMS (1)	108 (1) AE±AF
Cd	ng/g	---	---	---	---	---	---	---	---	116 ± 31 (5)	AF (5)	---
Ce	ug/g	---	0.99 ± 0.12 (17)	0.98	0.82 - 1.25	---	1.01 ± 0.13 (15)	---	---	0.96 (2)	SSMS (2)	---
Cl	ug/g	690	730 ± 40 (35)	730	630 - 810	605 (2)	720 ± 60 (23)	---	767 ± 34 (5)	707 ± 19 (3)	PAA (3)	735 (2) TCGS
Co	ng/g	200	160 ± 37 (49)	150	100 - 260	160 ± 34 (5)	161 ± 37 (43)	190 (1)	---	107 (1)	VOLT (1)	180 (1) SSMS
Cr	ug/g	2.6 ± 0.3	2.6 ± 0.3 (94)	2.6	1.9 - 3.3	2.5 ± 0.4 (18)	2.6 ± 0.3 (47)	2.3 ± 0.4 (12)	2.5 ± 0.3 (5)	2.22 (1)	PAA (1)	1.9 (1) POL
Cr	ug/g	---	---	---	---	---	---	---	---	2.8 ± 0.4 (8)	SSMS (8)	2.6 (1) NM
Cr	ug/g	---	---	---	---	---	---	---	---	---	---	2 (1) GCHML
Cr	ug/g	---	---	---	---	---	---	---	---	---	---	2 (1) GC-AA
Cs	ng/g	40	38 ± 9 (20)	40	20 - 50	---	40 ± 13 (19)	---	---	---	---	3.25 (2) ICPMS
Cu	ug/g	12 ± 1	12.0 ± 1.4 (164)	12	8.9 - 16	11.8 ± 1.1 (41)	12.2 ± 1.8 (39)	12.3 ± 1.8 (28)	12.4 ± 2.4 (22)	12.1 (1)	PAA (1)	11 (1) AE±AF
Cu	ug/g	---	---	---	---	---	---	---	---	11.4 ± 1.1 (7)	SSMS (7)	16.5 (2) CPAA
Cu	ug/g	---	---	---	---	---	---	---	---	12.4 ± 0.4 (6)	ASV (6)	11.9 (1) HPIC
Cu	ug/g	---	---	---	---	---	---	---	---	---	---	---
Oy	ng/g	---	82 ± 23 (4)	80	53 - 110	---	73 ± 18 (3)	---	---	110 (1)	SSMS (1)	---
Er	ng/g	---	29.7 ± 1.5 (3)	30	28 - 31	---	29.5 (2)	---	---	30 (1)	SSMS (1)	---
Eu	ug/g	---	24 ± 3 (20)	24	20 - 31	---	24 ± 3 (20)	---	---	20 (1)	SSMS (1)	---
F	ug/g	4	3.9 ± 0.5 (10)	3.8	3.12 - 4.8	3.6 (1)	---	---	---	4.0 ± 0.2 (5)	ISE (5)	4.8 (1) MS
F	ug/g	---	---	---	---	---	---	---	---	---	---	---
Fe	ug/g	300 ± 20	286 ± 28 (147)	290	213 - 348	270 ± 40 (23)	289 ± 23 (43)	278 ± 32 (27)	297 ± 36 (22)	318 ± 24 (3)	PAA (3)	3.40 (2) COLOR
Fe	ug/g	---	---	---	---	---	---	---	---	240 ± 60 (13)	OES (13)	237 (1) GCHML
Fe	ug/g	---	---	---	---	---	---	---	---	310 ± 34 (3)	ASV (3)	290 (1) CPAA
Fe	ug/g	---	---	---	---	---	---	---	---	279 ± 17 (5)	COLOR (5)	312 (3) POL

TABLE 1571-1: COMPILED DATA FOR MBS SRM 1571 ORCHARD LEAVES (cont.)

ELE	UNITS	NBS	CONSENSUS		MEDIAN	RANGE	AA		MAA		ICPES		XRF		OTHER METHODS	
		Mean \pm SD	Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)
Ga	ng/g	80	88 \pm 9	(4)	86	78 - 100	---	---	88 \pm 9	(4)	---	---	---	---	---	---
Gd	ng/g	---	68 \pm 68	(6)	81	1.64 - 111	---	---	61 \pm 51	(5)	---	---	---	---	100	(1) SSMS
Ge	ng/g	---	150	(1)	---	---	---	---	---	---	150	(1)	---	---	---	---
H	%	---	5.84 \pm 0.26	(5)	5.91	5.54 - 6.1	---	---	---	---	---	---	---	---	5.7 \pm 0.3	(3) TCDS
H2O-	%	---	11.4	(1)	---	---	---	---	---	---	---	---	---	---	11.4	(1) GRAV
Hf	ng/g	---	30 \pm 5	(6)	28	23 - 37	---	---	30 \pm 5.0	(6)	---	---	---	---	---	---
Hg	ng/g	155 \pm 15	155 \pm 14	(87)	155	122 - 190	154 \pm 16	(38)	160 \pm 19	(46)	140	(1)	---	---	170	(2) POT
I	ng/g	---	---	---	---	---	---	---	15 \pm 6	(3)	---	---	---	---	146	(1) FAE
I	ng/g	170	186 \pm 18	(9)	188	160 - 220	---	---	186 \pm 18	(9)	---	---	---	---	20	(1) SSMS
I-129	fci/g	---	0.0060	(1)	---	---	---	---	0.0060	(1)	---	---	---	---	---	---
In	ng/g	---	1.6 \pm 0.3	(4)	1.6	1.23 - 2	---	---	1.6 \pm 0.3	(4)	---	---	---	---	---	---
Ir	ng/g	---	15	(1)	---	---	---	---	15	(1)	---	---	---	---	---	---
Y	%	1.47 \pm 0.03	1.44 \pm 0.07	(83)	1.45	1.26 - 1.62	1.41 \pm 0.04	(9)	1.45 \pm 0.06	(32)	1.45 \pm 0.13	(16)	1.48 \pm 0.10	(12)	1.45	(2) PAA
Z	%	---	---	---	---	---	---	---	---	---	---	---	---	---	1.43	(1) FE
Zn	ug/g	---	1.17 \pm 0.11	(30)	1.2	0.95 - 1.4	---	---	1.16 \pm 0.13	(27)	---	---	---	---	---	---
Zn	ug/g	600	700 \pm 150	(5)	770	500 - 830	630 \pm 170	(3)	770	(1)	---	---	---	---	---	---
Lu	ng/g	---	5.1 \pm 2.5	(7)	4	2.9 - 8.5	---	---	5.1 \pm 2.5	(7)	---	---	---	---	---	---
Hg	ug/g	6200 \pm 200	6050 \pm 330	(71)	6100	5140 - 6800	5820 \pm 320	(12)	6100 \pm 400	(14)	5840 \pm 470	(24)	5980	(2)	6125 \pm 29	(4) PAA
Hg	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	6500	(1) COLOR
Mn	ug/g	91 \pm 4	89 \pm 5	(139)	89.4	76 - 103	88 \pm 5	(23)	90 \pm 7	(44)	88 \pm 7	(30)	90 \pm 9	(23)	6500 \pm 500	(4) 14NAA
Mn	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mn	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mn	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mo	ng/g	300 \pm 100	290 \pm 70	(24)	280	200 - 410	320 \pm 100	(4)	300 \pm 50	(12)	220 \pm 40	(4)	---	---	400	(1) PAA
Mo	ng/g	---	---	---	---	---	---	---	---	---	---	---	---	---	410	(1) POL
N	%	2.76 \pm 0.05	2.72 \pm 0.04	(16)	2.71	2.61 - 2.81	---	---	---	---	---	---	---	---	2.73 \pm 0.02	(6) TITR
N	%	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
N	%	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
N-15	atom %	---	0.3670	(1)	---	---	---	---	---	---	---	---	---	---	---	---
Na	ug/g	82 \pm 6	89 \pm 15	(49)	87	74 - 140	125.5	(2)	91 \pm 22	(33)	102 \pm 25	(6)	---	---	84 \pm 4	(3) PAA
Na	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Nb	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Nb	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Nd	ng/g	---	510 \pm 130	(9)	480	320 - 765	---	---	500 \pm 150	(7)	---	---	---	---	540	(2) SSMS
Ni	ug/g	1.3 \pm 0.2	1.3 \pm 0.2	(59)	1.3	0.95 - 1.8	1.26 \pm 0.14	(15)	1.4 \pm 0.25	(10)	1.4 \pm 0.3	(9)	1.3 \pm 0.3	(10)	1.43 \pm 0.13	(3) PAA
Ni	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	1.32	(1) ASV
Ni	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Ni	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
P	ug/g	2100 \pm 100	2000 \pm 180	(56)	2000	1560 - 2400	2040 \pm 90	(6)	2080	(2)	2000 \pm 250	(26)	2050 \pm 240	(5)	1.26 \pm 0.10	(3) COLOR
P	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	1980 \pm 280	(9) OES
P	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	1910 \pm 100	(3) COLOR

TABLE 1571-1: COMPILED DATA FOR NBS SRM 1571 ORCHARD LEAVES (cont.)

ELE	UNITS	NBS		CONSENSUS		MEDIAN	RANGE	AA		NAA		ICPES		XRF		OTHER METHODS		Mean (n) Method	
		Mean ± SD	(n)	Mean ± SD	(n)	Mean ± SD	(n)	Mean ± SD	(n)	Mean ± SD	(n)	Mean ± SD	(n)	Mean ± SD	(n)	Mean ± SD	(n)	Mean ± SD	(n)
Pb	ug/g	45 ± 3	(124)	44 ± 3	(4)	44.7	37 - 54	44 ± 5	(54)	43 ± 2	(4)	45 ± 6	(19)	46 ± 4	(17)	45 ± 4	(5)	PAA	50 (1) AEAF
Pb	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37 ± 6	(6)	SSMS	49.5 (2) 14NAA
Pb	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	43.5	(2)	ICPMS	57 (1) CPAA
Pb	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	47	(1)	IDMS	41.8 (1) HPLC
Pd	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Pr	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Pt	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Rb	ug/g	12 ± 1	(67)	11.4 ± 1.2	(37)	11.28	8.5 - 14.8	11.5	(1)	11.5 ± 1.2	(37)	---	---	---	---	---	---	---	---
S	ug/g	1900	(31)	2040 ± 240	(31)	1960	1660 - 2600	---	---	---	---	---	---	---	---	---	---	---	---
S	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
S	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sb	ug/g	2.9 ± 0.3	(76)	2.9 ± 0.3	(51)	2.9	2.3 - 3.5	2.9 ± 0.4	(5)	2.9 ± 0.3	(51)	2.8 ± 0.4	(5)	---	---	---	---	---	---
Sb	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sc	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Se	ug/g	80 ± 10	(96)	63 ± 14	(31)	65	40 - 90	---	---	64 ± 13	(30)	---	---	---	---	---	---	---	---
Se	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Si	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sm	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sn	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sr	ug/g	37 ± 1	(53)	36 ± 3	(13)	36	28 - 44.2	34	(1)	38 ± 3	(13)	35.8 ± 2.4	(10)	35 ± 4	(17)	34 ± 4	(4)	PAA	2000 (1) IC
Sr	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Ta	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Tb	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Te	ug/g	10	(2)	10.5	(9)	13	9 - 18	---	---	13 ± 3	(9)	---	---	---	---	---	---	---	---
Th	ug/g	64 ± 6	(13)	58 ± 12	(13)	59	40 - 85	---	---	58 ± 12	(13)	---	---	---	---	---	---	---	---
Ti	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Ti	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Tl	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Tm	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
U	ug/g	29 ± 5	(38)	29 ± 3	(16)	30	25 - 34.3	---	---	29 ± 3	(16)	---	---	---	---	---	---	---	---
V	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
W	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Y	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Yb	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Zn	ug/g	25 ± 3	(188)	25 ± 2	(55)	25.3	19 - 32	26 ± 3	(43)	25 ± 3	(55)	25 ± 3	(36)	25 ± 3	(23)	28 ± 4	(7)	PAA	29.0 (2) POL
Zn	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Zn	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Zn	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Zr	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Zr	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ag (ng/g)</u>					<u>Al (ug/g) cont.</u>				
<	20	L	ITNA	74RAN 02	398	24		ITNA	82EHM 01
<	100		OES	7580L 02	405		11	SSMS	85VOS 01
13	5		RTNA	80SLO 01	407	11	6	ITNA	74HOF 01
620	60		RTNA	74CAR 03	420	58		ITNA	77HAM 01
14000	1000		ITNA	84GIB 01	430			CPAA	80HAN 01
<u>Al (ug/g)</u>					430	40		ITNA	74RAN 02
99			OES	75JON 02	440			RTNA	72MOR 03
103	22	6	ITNA	74HOF 01	460	7		VV	81NON 01
110	140	R	AA	75MAN 01	460	33		ITNA	79KOB 03
123	11	11	ICPES	81MUN 01	470		35	ITNA	81GLA 03
128			OES	75JON 11	472	20		ITNA	84NDI 01
137.2	16.3	6	COLOR	85BAR 01	488			CPXRF	84KAU 01
140	8		ICPES	81BLA 02	500			ITNA	80CRE 01
146	20		ICPES	79ABE 01	520	180		FAA	77FUJ 01
151.6	8.9	6	COLOR	85BAR 01	824	50		ITNA	80SLO 01
157			ICPES	78CAP 01	<u>As (ug/g)</u>				
165			OES	75JON 07	1.1			ITNA	78KEL 02
187	27		ICPES	84ABD 01	3.5	1.6		CPXRF	80KIR 01
196			OES	75JON 06	7.5			SSMS	81VER 02
201			OES	75JON 01	8	1		PAA	80SEG 01
223			OES	75JON 09	8.5	0.3		HAA	74LOO 01
231			OES	75JON 04	8.66	1.25		ITNA	79REN 03
241	7	11	ICPES	81MUN 01	8.7	0.2		RTNA	73HEY 01
243			OES	75JON 08	8.8	0.4		ICPES	80HAA 01
251			ICPES	81GOO 01	8.9	2.2		ICPES	81NAD 01
255			OES	75JON 05	9			RTNA	75ABU 01
278			OES	75JON 10	9	0.4	H	ICPES	79ROB 01
296	30		ITNA	772IK 01	9.1		1	IENA	79KUC 01
322	18	11	ICPES	82JON 01	9.2			ITNA	79KUC 01
322	22		14NAA	81WIL 01	9.25	0.44		ITNA	84NDI 01
330			NAA	77LAU 01	9.27			HAA	77IHN 01
333			ITNA	76BAT 01	9.3		35	HAA	77TAM 01
337			ICPES	84NAD 01	9.4	0.5		HAA	84NAR 01
343	460	RD	ITNA	79IMA 03	9.4	1		HAA	76VIJ 02
343	460	R	ITNA	79IMA 01	9.5			HAA	85IKE 01
347	7.5		POL	72MAI 01	9.5			HAA	81INU 01
347	7.5		POL	77MAI 01	9.5			AA	83ELA 01
349.7	6.1		ITNA	77GOO 01	9.5	0.2		RTNA	83DAN 01
350			ITNA	78LAU 02	9.5	0.3	11	HAA	81RAP 01
359	4		IENA	79JON 01	9.5	0.5		HAA	85NAR 01
372	20		IENA	85GLA 02	9.5	0.5		RTNA	80SLO 01
377	21		ICPES	79MCQ 01	9.5	0.76		RTNA	79HEI 04
377	62		ICPES	85LIE 02	9.5	0.8		RTNA	79ROS 02
378	13		ITNA	75RIC 01	9.58	2.25		ITNA	85MAD 01
380			ITNA	84GLA 02	9.6			FAA	82HEI 01
380	100		14NAA	81WIL 02	9.6	0.3	11	HAA	81RAP 01
383			ITNA	78CAP 01	9.6	0.4		HAA	85YAM 01
390	50		AA	79MCQ 01	9.6	0.5		AA	83RAP 01

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>As (ug/g) cont.</u>					<u>As (ug/g) cont.</u>				
9.68	0.14		NAA	74HEY 01	10.14			ASV	78DAV 01
9.7		11	HAA	82CRO 03	10.2		35	XRF	77TAM 01
9.7	0.12		RTNA	72BYR 01	10.2			HAA	80HOW 01
9.7	0.2		RTNA	73DAM 01	10.2	0.2		RTNA	85TIA 01
9.7	0.2		HAA	83MAH 01	10.2	0.2		HAA	77SMI 01
9.7	0.3		RTNA	79KAN 02	10.2	0.2		COLOR	77BUR 01
9.7	0.3		HAA	83MAH 04	10.2	0.5	7	RTNA	80GAL 02
9.7	0.4	7	RTNA	80GAL 02	10.2	1		PAA	74CHA 01
9.7	0.4	7	RTNA	77GIL 03	10.2	1		NAA	77JER 01
9.7	0.4		RTNA	78GAL 01	10.3			HAA	81ARA 01
9.7	0.4		ITNA	75RIC 01	10.3			FAA	82PER 02
9.76	0.17		RTNA	79HOE 01	10.3	0.2		HAA	80AGE 02
9.8			HAA	84IKE 01	10.3	0.2	34	HAA	78FLA 01
9.8	0.1		HAA	81KNA 01	10.3	0.4	7	RTNA	77GIL 03
9.8	0.1	11	HAA	81RAP 01	10.3	0.4	7	RTNA	80GAL 02
9.8	0.3		RTNA	82COR 01	10.3	0.9		ITNA	81KOS 01
9.8	0.4	H	ICPES	81PIC 01	10.3	1.6		RTNA	79REN 01
9.8	0.9		COLOR	76VIJ 02	10.4	0.4		ITNA	78LAU 02
9.8	0.9		ESCA	78CAR 01	10.43	0.22		HAA	81UTH 01
9.8	3.2		XRF	78STA 02	10.5			ITNA	82AKA 01
9.85			HAA	84YAM 01	10.5		1	IENA	79KUC 01
9.9			FAA	83XIA 01	10.5			HAA	83KUM 01
9.9	0.1		IENA	78WAN 01	10.5	0.6		HAA	85NAR 03
9.9	1.3		RTNA	85GAU 04	10.5	1		PAA	76KAT 04
9.9	1.6		ICPES	85LIE 02	10.6			ASV	81LEE 01
9.93	0.13		ITNA	73DAM 01	10.6	0.3		14NAA	81WIL 01
9.98	0.31		HAA	80TAM 01	10.6	0.5		14NAA	81WIL 02
10			RTNA	79BYR 01	10.6	0.6	6	HAA	81KAH 01
10		11	HAA	82CRO 03	10.6	0.8		EXRF	73GIA 01
10			HAA	79PEA 01	10.6	0.8		RTNA	74ORV 01
10			RTNA	72MOR 03	10.7	0.4		FAA	78HAY 01
10.0	0.1	6	HAA	81KAH 01	10.7	1	6	ITNA	74BEC 01
10.0	0.1		VV	81NON 01	10.8		6	NAA	78GAN 01
10.0	0.1		ICPES	84LIV 01	10.8			FAA	78CAP 01
10.0	0.1		FAA	79PET 01	10.8			HAA	81BRO 01
10.0	0.4		RTNA	78GIL 01	10.8			IENA	84GLA 02
10	1	6	ICPES	85ABD 01	10.8	0.5		IENA	82GLA 02
10	1		EXRF	80DYC 01	10.8	0.9		RTNA	76MEL 01
10	2		COLOR	79MCQ 01	10.82	0.25		HAA	77YAS 02
10	2		MPOES	83SAR 01	11			ICPES	79MCQ 01
10	2		ITNA	77MIN 01	11			ICPES	79MCQ 02
10	14	RD	ITNA	79IMA 03	11			ICPMS	83DOU 02
10	14	R	ITNA	79IMA 01	11.0	0.6		PAA	78HIS 01
10.1			ITNA	80CRE 01	11	1		PAA	76KAT 02
10.1	0.2	19	ITNA	74RAN 02	11	1		HAA	76FIO 01
10.1	0.3	7	RTNA	77GIL 03	11.0	1.5	7	RTNA	80GAL 02
10.1	0.3		RTNA	78WEE 01	11	2		RTNA	77KUS 01
10.1	0.3		ITNA	80GAL 02	11	2		ITNA	85WAH 01
10.1	0.4		IENA	81KOS 01	11.0	2.9		ITNA	84TU 01
10.1	0.8		EXRF	79GIA 01	11	3		ITNA	77ZIK 01

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>As (ug/g) cont.</u>					<u>As (ug/g) cont.</u>				
11.5		11	SSMS	85VOS 01	14.1	1.5		SSMS	84VOS 01
11.5	0.3		GCMES	75TAL 01	14.3			XRF	78CAM 02
11.5	0.47		HAA	81YAN 01	14.3	0.4		EXRF	77NIE 01
11.5	0.5		HAA	81YAN 01	14.7	2		ITNA	83AHM 01
11.5	1.5		RTNA	73GOE 01	15	0.1		RTNA	77BAN 03
11.5	1.5	D	RTNA	74GOE 01	15.3	0.5		EXRF	73SPA 01
11.6			HAA	77SIE 01	15.3	1.6		SSMS	84VOS 01
11.6	0.27	H	HAA	76SIE 01	15.3	2		ITNA	79AHM 01
11.6	1.3		ITNA	74NAD 02	15.4	0.2	19	ITNA	74RAN 02
11.6	1.8		RTNA	79NIC 01	15.7	5		CPXRF	85CLA 01
11.7			NM	83MAR 03	16			AA	79HIL 01
11.8	0.8		SSMS	77DON 01	16	2		CPXRF	77CAM 01
11.9		H	FAE	79FEL 01	17			CPXRF	76ZEI 01
11.9	0.1		FAA	80DUP 01	17			CPAA	78MCG 01
11.9	0.2		ITNA	81HAB 01	19		6	ICPES	85ABD 01
11.9	0.6		ICPES	83OLI 01	26			AF	85NAR 02
11.98	0.08	H	ICPES	81PAH 01	38			EXRF	81PAR 01
12			ICPES	84MAR 01	<u>AS(III) (ug/g)</u>				
12			RTNA	74ERD 01	4.9			HAA	76AGG 01
12	0.38		HAA	82TAM 01	<u>Au (ng/g)</u>				
12	0.6		AE+AF	82MAT 01	0.72	0.25		RTNA	84TJI 01
12	0.6	11	HAA	82JON 01	0.78	0.15		ITNA	79REN 03
12	1		ITNA	76KUC 01	0.97	0.09		RTNA	77NAD 01
12	1.5		RTNA	83BRA 01	1			RTNA	72MOR 03
12	2		HAA	79STO 01	1	0.5		ITNA	82QUR 01
12	2.5		ITNA	77HAM 01	1.2		1	IENA	79KUC 01
12	2.6		EXRF	75REU 01	1.4			ITNA	81KUL 01
12	3		ITNA	81KUL 01	1.4	0.3		ITNA	85MAD 01
12.15	0.43		NAA	76GUZ 01	1.4	0.5		IENA	81KOS 01
12.2	0.3		AA	84MAT 01	1.43	0.08		RTNA	82ZEI 01
12.3	0.2		ITNA	79KOB 03	1.5			ITNA	79KUC 01
12.3	0.4		RTNA	73TJI 01	1.5	0.5		RTNA	77KUS 01
12.4	1		ITNA	85NDI 01	1.5	4	R*	RTNA	80SLO 01
12.5		11	SSMS	85VOS 01	1.6	0.2		RTNA	83SIR 01
12.7	0.7		ITNA	79JER 01	1.64	0.1		ITNA	77MIN 01
12.7	2		ITNA	82QUR 01	1.8		1	IENA	79KUC 01
12.9	0.4	11	HAA	82JON 01	1.8	0.3		ITNA	81HAB 01
12.9	2.3		SSMS	84VOS 01	2	0.8		ITNA	81KOS 01
13	0.1		ITNA	75BOL 01	3.5	0.6		RTNA	74CAR 03
13	1	H	ICPES	82HAH 01	4.2			FAA	85BRO 01
13	2.4		SSMS	84VOS 01					
13	3		CPAA	77ZIK 01					
13.2			CPXRF	75CAM 01					
13.3			ICPES	85NAR 02					
13.3	0.4		HAA	76WAU 01					
13.4	0.93		COLOR	73LEB 01					
13.5			HAA	76AGG 01					
13.7			CPXRF	84KAU 01					
14	1		ITNA	78FUR 01					
14.1		6	NAA	78GAN 01					

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>B (ug/g)</u>					<u>Ba (ug/g) cont.</u>				
16	12		ITNA	82SCH 05	37		6	ICPES	83BRA 02
22.55		6	AE+AF	74DAU 01	37	11	5	ITNA	80TOU 01
23			OES	75JON 10	37.7		6	ICPES	83BRA 02
24	2		ICPES	79HER 01	37.9		6	ICPES	83BRA 02
25.15		6	AE+AF	74DAU 01	37.9		1	IENA	79KUC 01
27			OES	75JON 05	38			OES	75JON 05
27			OES	75JON 02	38	4.7		CPXRF	80KIR 01
30			OES	75JON 01	39.4			ITNA	79KUC 01
31	3		ICPES	84PRI 01	40		11	SSMS	85VOS 01
31.2	2.8		NM	79YAN 01	40			OES	75JON 03
31.5			ICPES	81GOO 01	40			NAA	77LAU 01
31.7			TCGS	84HIG 01	40	3	9	ITNA	78LAU 02
31.9	4.7	14	FAA	79SZY 01	41	1.3		RTNA	77GUI 03
32			OES	75JON 04	41	4		ITNA	79SAT 01
32			OES	75JON 09	42	2		ICPES	79MCQ 02
32	4		ICPES	79ABE 01	42	2		ICPES	79MCQ 01
32.2	0.4		TCGS	79AND 01	42	6		ITNA	78LAU 02
32.5	0.5		COLOR	79YAN 01	43			OES	75JON 11
32.8	2.3	6	TCGS	76GLA 01	43	3		ITNA	85WAH 01
33			OES	75JON 07	43	5.7		ITNA	77HAM 01
33			OES	75JON 06	43.9		1	IENA	79KUC 01
33	2	11	ICPES	79MIZ 01	44	5		SSMS	84VOS 01
33	4		CPAA	80HAN 01	44	57	R	AA	75MAN 01
33.2	0.1		TCGS	79FAI 01	44.3			AA	74BUS 02
33.3		11	COLOR	85SHI 02	44.8	2.5		IENA	81KOS 01
33.3	2.3	6	TCGS	76GLA 01	45			ITNA	78CAP 01
33.4		11	COLOR	85SHI 02	45			OES	75JON 04
33.4	0.7		ICPES	81KNA 01	45	1		ICPES	85LIE 02
33.5	2.8	11	ICPES	81MUN 01	45	6		VV	81NON 01
34	1	11	ICPES	79MIZ 01	45	7		SSMS	84VOS 01
34.8	0.9	11	ICPES	81MUN 01	45.3	2.7		ITNA	81KOS 01
35.1	9.9	14	FAA	79SZY 01	45.6	2.43		ITNA	85MAD 01
36			CPAA	81SAS 02	45.7			ICPES	84NAD 01
36			OES	75JON 03	46		6	ICPES	83CHA 01
36	3		CPAA	81SAS 01	46	6		ITNA	74RAN 02
36	5		CPAA	75MCG 01	47	3		ITNA	81KUL 01
37	3		ICPES	84SOB 01	47.3	2.7		ITNA	84TU 01
38			OES	75JON 11	48		6	ICPES	83CHA 01
38			OES	75JON 08	48	8		SSMS	84VOS 01
40	1	11	ICPES	79MIZ 01	50	14		FAA	86GAU 01
<u>Ba (ug/g)</u>					51			RTNA	72MOR 03
0.3	0.1		CPXRF	77RIN 01	51.3	4.5		PAA	74CHA 01
14.7			SSMS	81VER 02	51.9			ICPES	78DAH 01
25.9	6.8		ITNA	81HAB 01	52			OES	75JON 01
28			ITNA	80CRE 01	52	8		SSMS	84VOS 01
30			NAA	74BEL 01	59.54	1.81		ITNA	79REN 03
35		11	SSMS	85VOS 01	62	21		ITNA	77ZIK 01
35.9	7		CPXRF	85CLA 01	80	22		14NAA	81WIL 02

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Be (ng/g)</u>					<u>Br (ug/g) cont.</u>				
13.7	1.8	6	ICPES	82SCH 01	9.2			ITNA	80CRE 01
14.8	1.6	6	ICPES	82SCH 01	9.2	0.2		ITNA	74RAN 02
19	4		ICPES	85LIE 02	9.3	0.6		EXRF	73GIA 01
26	1		FLUOR	77WIC 01	9.3	1.4		RTNA	78WEE 01
26	3		FAA	86GAU 01	9.4			ITNA	79KUC 01
30	4		VV	74FLO 01	9.5		1	IENA	79KUC 01
36	4	11	FAA	75OWE 01	9.5		1	IENA	79KUC 01
67	7	11	FAA	75OWE 01	9.5			XRF	78CAM 02
110	10		GC	73BLA 01	9.5	0.8		RTNA	76MEL 03
<u>Bi (ng/g)</u>					9.5	1		EXRF	77NIE 01
4	1	H	ICPES	81PAH 01	9.6	1.2	6	NAA	78GAN 01
30			FAA	77BRU 01	9.6	2.8		ITNA	77HAM 01
39			FAA	79INU 01	9.7	1.1		ITNA	78GIL 01
64			FAA	82HEI 01	9.8	0.78		ITNA	77STE 02
100		11	SSMS	85VOS 01	9.8	0.8		RTNA	79CRO 01
100	10		HAA	85YAM 01	9.8	1.1		CPXRF	85CLA 01
110	20		POL	72MAI 01	9.9	0.2		IENA	81KOS 01
110	20		POL	77MAI 01	10	1		ITNA	76KUC 01
110	100		POL	74MAI 01	10	2.1		VV	81NON 01
160			AF	85NAR 02	10	2.2		XRF	78STA 02
<u>Br (ug/g)</u>					10.1	0.8		ITNA	77GUI 02
5	5		ITNA	77ZIK 01	10.2	1		ITNA	81KUL 01
6.3	2		EXRF	77FLO 01	10.5	0.6		ITNA	81KOS 01
6.6	0.4		EXRF	73SPA 01	10.5	1.4		ITNA	79CRO 01
6.6	0.4	5	IENA	79GLA 02	10.6	1.5		ITNA	84TU 01
7.1			EXRF	81BIS 01	10.8	0.4	35	NAA	81GLA 03
7.3	3.2		CPXRF	80KIR 01	10.8	0.9	6	NAA	78GAN 01
7.3	9.3	R	ITNA	79IMA 01	10.9			ITNA	80SAT 01
7.3	9.3	RD	ITNA	79IMA 03	11			ITNA	78CAP 01
7.4	0.2		ITNA	75RIC 01	11	0.7	5	ITNA	80TOU 01
7.8	0.3		EXRF	80DYC 01	11	1.2		ITNA	79KOB 03
8.2			RTNA	72MCR 03	11.5	1.5		ITNA	85WAH 01
8.2	0.6		ITNA	80SLO 01	12	1.3		ITNA	79AHM 01
8.3	0.5	5	ITNA	80HOE 01	12	3		ITNA	77ZIK 01
8.48	0.07	5	ITNA	80HOE 01	12.1	1.3		ITNA	83AHM 01
8.5	0.5	6	ITNA	74BEC 01	12.5			ITNA	82AKA 01
8.6			ITNA	85MIS 01	34			EXRF	81PAR 01
8.7			ITNA	84GLA 02	<u>C (%)</u>				
8.8	0.6	5	IENA	79GLA 02	45.6	1.2		COUL	86CAH 01
8.8	1.6		EXRF	75REV 01	45.76	0.51		CB	82GLA 02
8.87			CPXRF	84KAU 01	45.8	1.3	35	CB	79GLA 04
9.0	0.5		EXRF	79GIA 01	46	2		TCGS	79FAI 01
9.0	0.5		ITNA	78LAU 02	46.35	0.31		CB	80SCH 02
9.0	0.62		ITNA	84NDI 01	47	5	35	TCGS	79GLA 04
9.1	0.5		ITNA	78WEE 01	52	5		TCGS	79AND 01
9.19	1.39		ITNA	79REN 03					

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
Ca (%)					Ca (%) cont.				
0.9		11	SSMS	85VOS 01	2.04			OES	75JON 03
1.58		35	AA	81GLA 04	2.04			AA	80URE 01
1.6	2.26	R	ITNA	79IMA 01	2.04	0.02	11	AA	78GAI 01
1.6	2.26	RD	ITNA	79IMA 03	2.05		6	ICPES	83CHA 01
1.63			OES	75JON 07	2.05	0.9		XRF	78STA 02
1.69			AF	85DAV 01	2.06			COLOR	77HAM 04
1.69	0.05		CPXRF	85CLA 01	2.07	0.06		IENA	79JON 01
1.74			CPXRF	84KAU 01	2.07	0.06	11	ICPES	81MUN 01
1.74			OES	75JON 05	2.08			OES	75JON 11
1.8			NAA	77LAU 01	2.08			OES	75JON 09
1.8			OES	75JON 02	2.08	0.01		PAA	74CHA 01
1.81			ITNA	82AKA 01	2.08	0.02	11	AA	78GAI 01
1.81	0.24	5	ITNA	80TOU 01	2.08	0.04		ITNA	79KOB 03
1.83	0.07		CPXRF	80KIR 01	2.08	0.06		ICPES	79ABE 01
1.86	0.1		14NAA	77VAN 01	2.09	0.04	11	ICPES	81MUN 01
1.89		6	ICPES	83BRA 02	2.1			ICPES	81GOO 01
1.90	0.11		ITNA	79REM 03	2.1			ICPES	83KEI 01
1.91			AA	77BRU 01	2.1			RTNA	72MOR 03
1.91			OES	75JON 10	2.1	0.05		ITNA	81KOS 01
1.92			EXRF	81BIS 01	2.1	0.08	6	EXRF	79MAT 01
1.93	0.07		EXRF	79KUE 01	2.1	0.2		14NAA	80FAA 01
1.93	0.09		ITNA	77ZIK 01	2.1	0.2		ITNA	78LAU 02
1.94			OES	75JON 04	2.11			ICPES	81WEI 01
1.96	0.002	11	AA	75ISA 01	2.11			AA	79HIL 01
1.96	0.06		FE	78KOR 01	2.11	0.08	6	EXRF	79MAT 01
1.97		6	ICPES	83BRA 02	2.12	0.07		IENA	81KOS 01
1.97	0.03	11	ICPES	82JON 01	2.13			SSMS	81VER 02
1.97	0.05		PAA	76KAT 02	2.13			ITNA	76BAT 01
1.97	0.055		PAA	76KAT 04	2.13	0.09		ITNA	75RIC 01
1.97	0.08		TCGS	79AND 01	2.13	0.11		TCGS	79FAI 01
1.97	0.15		14NAA	81WIL 02	2.14		6	ICPES	83CHA 01
1.98	0.02		ICPES	85LIE 02	2.14	0.02		ITNA	78FUR 01
1.98	0.04	11	ICPES	82JON 01	2.14	0.11		ITNA	84TU 01
1.98	0.05		ICPES	79MCQ 02	2.145	0.017		CPXRF	81ROB 02
1.98	0.07		ICPES	79MCQ 01	2.15			COLOR	80LAU 01
1.98	0.08		EXRF	75REU 01	2.15			ITNA	78CAP 01
1.99			XRF	78CAM 02	2.17			OES	75JON 08
1.99	0.06		EXRF	77NIE 01	2.17	0.03		EXRF	80DYC 01
2.00			OES	75ISA 01	2.18	0.16		AA	82HAR 01
2.00	0.08		ITNA	80SLO 01	2.2			EXRF	81OHT 01
2.00	0.19		ICPES	85LYO 01	2.2	0.02		ICPES	79HER 01
2.01	0.02		AA	79MCQ 01	2.2	0.05		PAA	78HIS 01
2.01	0.18		RTNA	80CAN 01	2.2	0.1		ITNA	81KUL 01
2.02	0.002	11	AA	75ISA 01	2.21	0.15		ITNA	77HAM 01
2.02	0.11		EXRF	82DAK 01	2.23	0.12		ITNA	83AHM 01
2.03			COLOR	84OGU 01	2.26	0.58		ICPES	84ABD 01
2.03			ICPES	78DAH 01	2.28			CPAA	80HAN 01
2.03	0.02	11	ICPES	82JON 01	2.29			OES	75JON 06
2.03	0.04	11	ICPES	82JON 01	2.29	0.04		VV	81NON 01
2.04	0.06		CPAA	77ZIK 01	2.41			OES	75JON 01

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ca (%) cont.</u>					<u>Cd (ng/g) cont.</u>				
2.46	0.09	5	ITNA	80TOU 01	116	10		FAA	84GLA 02
2.6			ICPES	84NAD 01	116	13		RTNA	80GRE 01
2.63			ICPES	78CAP 01	120			RTNA	85TIA 01
3.04		11	SSMS	85VOS 01	120			AA	84SAT 02
5.01			EXRF	81PAR 01	120		11	FAA	79HOE 02
					120			RTNA	74ROO 01
					120	7		AA	83FAG 01
					120	10	11	ASV	84LOC 01
					120	10	11	ASV	84LOC 01
70			RTNA	80SLO 01	120	10		IENA	81KOS 01
70			FAA	73LOO 01	120	10		ASV	84LOC 01
72	14		FAA	81ZAU 01	120	10		RTNA	83BRA 01
90		6	AF	84NAR 02	120	10		RTNA	74ORV 01
90			AA	79HIL 01	120	10		NAA	76GUZ 01
90	10		FAA	80LEG 01	120	14		FAA	78SMI 01
92	18		RTNA	73TJI 01	120	20	11	FAA	78SMI 01
95		11	FAA	79HOE 02	120	20	11	AA	86GAU 01
100			AA	79NAR 01	120	30		AA	84KAN 01
100			FAA	80PRE 01	120	40	6	AA	82ROD 03
100		11	SSMS	85VOS 01	120	50		ICPES	82JON 01
100		6	AF	84NAR 02	120	80	11	ICPES	84MAR 01
100			AA	73LOO 01	130			ICPES	84OHL 01
100	4		ASV	82SAT 02	130			FAA	82HEI 01
100	10		ASV	85ADE 01	130			ICPES	85NAR 02
100	10		POL	74MAI 01	130	5		FAA	74TAL 01
100	20		AA	83RAP 01	130	5	7	AA	73TAL 01
100	40		HAA	82WEI 01	130	7		FAA	74TAL 01
105			FAA	82HOE 01	130	7	7	AA	73TAL 01
105	5		FAA	79STO 01	130	10		ICPES	85KUM 01
105	10		FAA	84ROS 01	130	20		ITNA	81KOS 01
106	9		FAA	74RAI 02	130	160	11	ICPES	81NUN 01
108	8		AE+AF	74RAI 02	135			FAA	84OHL 01
109	2		FAA	79DAB 02	140			AA	83ELA 01
110			AF	85NAR 02	140	40		FAA	82WEI 01
110			FAA	82PRE 01	150	50		AA	80AGE 01
110			FAA	82AKA 01	150	50		AA	76GAL 01
110			RTNA	79BYR 01	150	60		TCGS	79AND 01
110	6		AA	80SCH 05	160	10		ICPES	79HER 01
110	10	D	FAA	80SCH 08	160	16		FAA	76URE 01
110	10		AA	82RIT 01	160	50		RTNA	80VAL 01
110	10		FAA	81KNA 01	160	70	11	ICPES	82JON 01
110	10		ICPES	83SCH 04	170			AF	78URE 02
110	10		NAA	77JER 01	170	70	11	ICPES	82JON 01
110	10		PAA	74CHA 01	180		16	AA	79ABO 01
110	10		AA	78RIT 01	190	40		FAA	77BRU 01
110	10		AF	75EPS 01	200	80		RTNA	76GAL 01
110	10		AA	75EPS 01	200	100	11	ICPES	82JON 01
114	18		FAA	84GLA 11	230	20		FAA	73SEG 01
115	8		AA	84STO 01	230	60		ITNA	74RAN 02
116	8	7	RTNA	80GAL 02	260	70	6	AA	84KAN 01
116	8		RTNA	78GAL 01					

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Cd (ng/g) cont.</u>					<u>Cl (ug/g) cont.</u>				
260	200		ICPES	85LIE 02	720	15		VV	81NON 01
350	20		ICPES	84ABD 01	720	25		ITNA	85WAH 01
370	10	6	ICPES	85ABD 01	720	140		PAA	76KAT 02
580		16	AA	79ABO 01	730	26		NAA	78GAN 01
660	340		AA	79MON 01	730	30		TCGS	79FAI 01
2000			AE+AF	79ULL 01	730	60		ITNA	80SLO 01
<u>Ce (ug/g) cont.</u>					732	29		ITNA	77GUI 02
0.75	0.067		ITNA	77HAM 01	732	29		NAA	76MIL 02
0.82		11	SSMS	85VOS 01	739			ITNA	76BAT 01
0.84	0.04		ITNA	81KOS 01	740	30		TCGS	79AND 01
0.866	0.059		RTNA	83TJI 01	740	58		ITNA	77HAM 01
0.9		D	RTNA	82LAU 01	750			ITNA	74RAN 02
0.9			RTNA	77LAU 02	750	19		ITNA	75RIC 01
0.91	0.06		RTNA	80SLO 01	750	35		ITNA	77STE 02
0.92	0.14		ITNA	77NAD 02	755			ITNA	80CRE 01
0.949	0.076		RTNA	86TSU 01	760			ITNA	84GLA 02
0.97			ITNA	79KUC 01	770			XRF	78CAM 02
0.98	0.05		ITNA	78LAU 02	770	150		CPXRF	79REN 02
0.98	0.07		VV	81NON 01	770	240		EXRF	77NIE 01
1			RTNA	72MOR 03	773	108		ITNA	84NDI 01
1			NAA	77LAU 01	790			RTNA	72MOR 03
1.03	0.07		ITNA	84TU 01	800	40		IENA	79JON 01
1.05	0.33		RTNA	83SIR 01	810	150		EXRF	80DYC 01
1.1			SSMS	78URE 01	838			ITNA	86GAU 01
1.2	0.2		ITNA	81KUL 01	950	70		14NAA	81WIL 02
1.25	0.41		ITNA	84ODD 01	<u>Co (ng/g)</u>				
1.28	0.18		RTNA	84ODD 01	100			RTNA	72MOR 03
1.38	0.23		ITNA	85MAD 01	105	2		ASV	85ADE 01
<u>Cl (ug/g)</u>					107	3		VOLT	84ADE 02
53			SSMS	81VER 02	110	20	6	NAA	78GAN 01
400	770	RD	ITNA	79IMA 03	112	17		NAA	76GUZ 01
400	770	R	ITNA	79IMA 01	120	50		AA	76GAL 01
510		35	ITNA	81GLA 03	130			ITNA	78CAP 01
580	27		FAA	78TSU 01	130			NAA	77LAU 01
630	24		AA	78TSU 01	130			ITNA	80CRE 01
632	80		ITNA	77ZIK 01	130	10	D	ITNA	79KUC 01
638	27		ISE	81NAD 01	130	10		RTNA	74GOE 01
675			ITNA	78CAP 01	130	10		ITNA	78LAU 02
685	32		PAA	74CHA 01	130	20	6	RTNA	73GOE 01
687	32		ITNA	83LI 01	130	20		ITNA	74BEC 01
690			NAA	76GUZ 01	130	20		RTNA	77KUS 01
700	60	35	ITNA	81GLA 04	138	10		ITNA	83SIR 01
706	26		ITNA	78FUR 01	140			NAA	74RAN 02
715			CPXRF	84KAU 01	140			NAA	74BEL 01
717	193		PAA	76KAT 04	140	10		ITNA	78GIL 01
719.5			ITNA	82AKA 01	140	30	6	NAA	78GAN 01
					142	7		FAA	75HAG 01
					145			ITNA	82AKA 01

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Co (ng/g) cont.</u>					<u>Cr (ug/g) cont.</u>				
150			ITNA	80SAT 01	2.0			AA	79MCQ 01
150		1	IENA	79KUC 01	2.0			ICPES	79MCQ 02
150	20	11	FAA	80FUD 01	2.0	0.13		GC-AA	76WOL 01
150	30		ITNA	76KUC 01	2.0	0.2	6	ITNA	74BEC 01
160	10		ITNA	82COR 01	2.05		11	AA	79HOE 02
160	20		RTNA	80SLO 01	2.2	0.2		ICPES	84SOB 01
170	10		ITNA	79KOB 03	2.2	0.3		RTNA	77MEL 01
170	10		ITNA	79SAT 01	2.2	0.4		VV	81NON 01
170	10		ITNA	84TU 01	2.2	1		CPXRF	80KIR 01
180			ITNA	85MIS 01	2.2	2.9	R	AA	75MAN 01
180		11	SSMS	85VOS 01	2.22	0.2		PAA	74CHA 01
180	20		RTNA	77MEL 01	2.23		6	NAA	78GAN 01
180	28		ITNA	77HAM 01	2.25		11	AA	79HOE 02
180	30		ITNA	81KUL 01	2.28		11	SSMS	85VOS 01
190	5	11	FAA	80FUD 01	2.33			CPXRF	84KAU 01
190	40		VV	81NON 01	2.37	0.07		SSMS	72MAG 01
190	100		ICPES	85LIE 02	2.4			RTNA	75ABU 01
198	61		ITNA	85MAD 01	2.4			ITNA	79KUC 01
200			AA	84SAT 02	2.4			AA	83ELA 01
210	20		ITNA	81KOS 01	2.4	0.1		ITNA	85WAH 01
210	20	6	ITNA	74BEC 01	2.4	0.1	11	ICPES	82JON 01
210	30		ITNA	85WAH 01	2.4	0.1	9	ITNA	78LAU 02
220	30		ITNA	82QUR 01	2.4	0.1		RTNA	76MEL 03
220	40		ITNA	78FUR 01	2.4	0.1		CHEML	74LI 01
230	30		ITNA	79AHM 01	2.4	0.3		ITNA	78LAU 02
230	30		ITNA	83AHM 01	2.4	0.36		ITNA	77HAM 01
230	50		IENA	81KOS 01	2.4	0.6		ICPES	81BLA 02
260	120	5	ITNA	80TOU 01	2.4	1.1		CPXRF	85CLA 01
290	100		ITNA	77ZIK 01	2.46	0.025		RTNA	74MCC 01
297	26		COLOR	82KIR 01	2.463	0.02	11	RTNA	78MCC 01
300			FAA	82HOE 01	2.47	0.14		FAA	75CAR 02
300	40		ITNA	76GAL 01	2.495	0.014	11	RTNA	78MCC 01
320		11	SSMS	85VOS 01	2.5			RTNA	72MOR 03
420	470		ITNA	75RIC 01	2.5			ITNA	85MIS 01
460	100		ITNA	79REN 03	2.5		11	SSMS	85VOS 01
680	80		ICPES	84ABD 01	2.5	0.4		ITNA	76KUC 01
800	600		XRF	78STA 02	2.5	1.6		EXRF	73GIA 01
					2.56	0.11		FAA	83CAR 02
					2.574	0.01		ITNA	78MCC 01
					2.58	0.04		ITNA	81KOS 01
					2.59	0.15	7	FAA	80CHA 01
1.07	0.13	6	NAA	78GAN 01	2.6		11	AA	79HOE 02
1.1	0.2	11	ICPES	81MUN 01	2.6			ITNA	79KOB 03
1.5			AA	73LOO 03	2.6	0.1		FAA	81GLA 03
1.6	0.2	6	ICPES	85ABD 01	2.6	0.1	35	NM	80SHI 01
1.9			POL	83HOL 01	2.6	0.2		ITNA	74BEC 01
1.9	0.3	11	ICPES	81MUN 01	2.6	0.2	6	ICPES	82JON 01
1.9	0.3		ICPES	85LIE 02	2.6	0.3	11	ITNA	78FUR 01
1.97	0.44		NAA	76GUZ 01	2.6	0.4		ITNA	85NDI 01
2.0			NAA	74BEL 01	2.64	0.2		ITNA	80CHA 01
2.0			ICPES	79MCQ 01	2.65	0.16	7	FAA	

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Cr (ug/g) cont.</u>					<u>Cs (ng/g)</u>				
2.67	0.15	7	RTNA	80GAL 02	20			NAA	77LAU 01
2.67	0.15		RTNA	78GAL 01	24	3	9	ITNA	78LAU 02
2.7			ITNA	78CAP 01	28	5		ITNA	78LAU 02
2.7			AA	81ARA 01	28	5		ITNA	81KUL 01
2.7			FAA	82HOE 01	29	2		ITNA	74RAN 02
2.7	0.1		ITNA	84TU 01	32	8		ITNA	84TU 01
2.7	0.17		AA	80AGE 01	36	6		ITNA	84GLA 11
2.7	0.2		AA	83RAP 01	37	2		ITNA	84GLA 02
2.7	0.2		ITNA	79SAT 01	37.4	11		NAA	76GUZ 01
2.7	0.2		DCPES	79REE 01	38	7	6	ITNA	74BEC 01
2.7	0.2	D	DCPES	81REE 01	40		11	SSMS	85VOS 01
2.7	0.3		ITNA	82COR 01	40	9		VV	81NON 01
2.72	0.15		ITNA	84GIB 01	40	10		ITNA	79SAT 01
2.8			SSMS	81VER 02	42			ITNA	80CRE 01
2.8			NAA	77LAU 01	42	1		IENA	81KOS 01
2.8	0.2		ITNA	75RIC 01	44	2		ITNA	85GAU 04
2.8	0.2		ITNA	79AHM 01	48	4		ITNA	81KOS 01
2.8	0.2		ICPES	81KNA 01	49	9		ITNA	85MAD 01
2.8	0.2		ITNA	82QUR 01	50	6		ITNA	83AHM 01
2.8	0.2		ITNA	83AHM 01	50	10		ITNA	85WAH 01
2.8	0.4		ICPES	84ABD 01	80	10		RTNA	77MEL 01
2.8	0.4		ITNA	74RAN 02	150	60		ITNA	79REN 03
2.8	0.6		FAA	74WOL 01	300	50	7	RTNA	80GAL 02
2.82		7	FAA	80CHA 01	<u>Cu (ug/g)</u>				
2.9			RTNA	79TJI 01	3.6	1.3	6	ITNA	74HOF 01
2.9			RTNA	78GOE 01	8			EXRF	82KEE 01
2.9	0.3	D	RTNA	74GOE 01	8.1	2		EXRF	77FLO 01
2.9	0.3		RTNA	73GOE 01	8.4	0.8		ITNA	78FUR 01
2.9	0.4		EXRF	80DYC 01	8.9	1.7		FAA	77FUJ 01
2.9	0.4		SSMS	84VOS 01	9.4			EXRF	81BIS 01
2.92	0.28		ITNA	85MAD 01	9.5			ICPES	81GOO 01
3.0			ICPES	81GOO 01	9.6	0.8		XRF	85AVA 01
3.0	0.2		AA	76GAL 01	9.6	1.7		EXRF	73SPA 01
3.0	0.3		SSMS	84VOS 01	9.7		11	SSMS	85VOS 01
3.0	1		ITNA	77ZIK 01	9.76	0.61	9	ITNA	77GAN 03
3.1		6	ICPMS	83DOU 01	9.8	0.6	6	NAA	78GAN 01
3.14	0.4		ITNA	81HAB 01	9.8	0.6	6	NAA	78GAN 01
3.2	0.3		SSMS	84VOS 01	10			RTNA	72MOR 03
3.2	0.3		ITNA	81KUL 01	10	0.7		AA	78LIN 01
3.2	0.3		RTNA	76GAL 01	10	1		XRF	78LIN 01
3.3			ITNA	80CRE 01	10	2		CPXRF	77CAM 01
3.4		6	ICPMS	83DOU 01	10	2		AA	82HAR 01
3.4	0.5		SSMS	84VOS 01	10.1	1.2		RTNA	83DAN 01
3.4	0.5		ITNA	76GAL 01	10.3			AA	76KRI 03
3.67	0.01		ICPES	79HER 01	10.3	0.5		FAA	82JEN 02
3.9	15		XRF	78STA 02	10.3	0.6		AA	76GAL 01
5.5	2.2		PAA	80YAM 01	10.4	2.4		EXRF	75REU 01
5.81	0.84		ITNA	79REN 03	10.4	13.3	RD	ITNA	79IMA 03

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Cu (ug/g) cont.</u>					<u>Cu (ug/g) cont.</u>				
10.4	13.3	R	ITNA	79IMA 01	11.8	0.4		RTNA	85TIA 01
10.5	1		RTNA	80SLO 01	11.8	0.7		ITNA	79KOB 03
10.6	8		SSMS	84VOS 01	11.9		11	SSMS	85VOS 01
10.7	0.3	11	ICPES	81MUN 01	11.9	0.6		HPLC	83ICH 01
10.7	0.9		ITNA	85NDI 01	11.9	1.4		FAA	82GRO 01
10.8		6	NAA	72SIN 01	11.9	1.6		ASV	79BRI 02
10.8	0.8		SSMS	84VOS 01	12			AA	73LOO 03
11			AA	84SAT 02	12			AA	76FUK 01
11			ICPES	81WEI 01	12			XRF	78CAM 02
11			FAA	83ATS 01	12			FAA	73SEG 01
11			AE+AF	79ULL 01	12			AA	79HIL 01
11		1	AA	77FRY 01	12			CPAA	78MCG 01
11			OES	75JON 10	12			OES	75JON 02
11	0.1		ICPES	83SCH 04	12			CPXRF	76ZEI 01
11	0.8	7	RTNA	80GAL 02	12			AA	81ARA 01
11	1		ICPES	84SOB 01	12			ASV	83HOL 01
11	1		FAA	79KRA 01	12	0.2	11	ICPES	82JON 01
11	1		ICPES	79MCQ 02	12	0.3	6	ICPES	85ABD 01
11	1		RTNA	77KUS 01	12	0.4		ICPES	80SCH 08
11	1.5		AA	79MON 01	12	0.4	11	ICPES	82JON 01
11	15	R	AA	75MAN 01	12	0.5		AA	73TAL 01
11.1	1		RTNA	82COR 01	12	0.8	11	ICPES	82JON 01
11.2			VV	81NON 01	12	1		AA	79MCQ 01
11.2		6	ICPES	83BRA 02	12	1		ICPES	79MCQ 01
11.2	0.18		AA	80AGE 01	12	1		AA	77YAN 01
11.2	1	6	POL	72SIN 01	12	1		AA	78RIT 01
11.2	1.3		ITNA	74RAN 02	12	1		RTNA	73GOE 01
11.3		16	AA	79ABO 01	12	1	D	RTNA	74GOE 01
11.3			ICPMS	85SCI 01	12	1.4		EXRF	77NIE 01
11.3	1		SSMS	84VOS 01	12	2		FAA	77LOR 01
11.3	2.3		XRF	78STA 02	12	2		RTNA	74CAR 03
11.4			ICPES	78CAP 01	12.1		16	AA	79ABO 01
11.43	0.2		RTNA	74RAV 01	12.1		6	ICPES	83BRA 02
11.5	0.5		RTNA	73TJI 01	12.1	0.2		ICPES	81KNA 01
11.5	0.6		FAA	84GLA 02	12.1	0.7		SSMS	84VOS 01
11.5	1		POL	74MAI 01	12.1	0.9		ITNA	79SAT 01
11.5	1		EXRF	79GIA 01	12.1	1.3		PAA	76WIL 01
11.6			FAA	78CAP 01	12.2	1.1		ICPES	79ABE 01
11.6	0.2		AA	75ABU 01	12.3	0.4		ICPES	85LIE 02
11.6	0.4		RTNA	78GAL 01	12.3	0.9		RTNA	76MEL 03
11.6	0.4		ICPES	81BLA 02	12.3	1.4		VV	80SCH 05
11.6	0.4	7	RTNA	80GAL 02	12.4	1.4		CPXRF	85CLA 01
11.6	0.6	11	ICPES	81MUN 01	12.4	1.4	11	ASV	84LOC 01
11.7	0.2	11	ICPES	82JON 01	12.4	1.6		RTNA	80VAL 01
11.7	0.4		AA	83RAP 01	12.4	1.9		RTNA	83SIR 01
11.7	1.7		CPXRF	81ROB 02	12.5		11	AA	79HOE 02
11.8		6	ICPMS	83DOU 01	12.5	0.5	11	ASV	84LOC 01
11.8			RTNA	79BYR 01	12.5	0.7		FAA	74WOL 01
11.8	0.3		RTNA	78GIL 01	12.5	0.8		VV	79STO 01
11.8	0.3	7	RTNA	80GAL 02	12.5	1.5		FAA	84ROS 01

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Cu (ug/g) cont.</u>					<u>Cu (ug/g) cont.</u>				
12.6		6	ICPMS	83DOU 01	18.1			CPXRF	75CAM 01
12.6	0.6		EXRF	73GIA 01	18.3	6.9		XRF	77SMI 04
12.6	0.7		ASV	84LOC 01	19			ITNA	78KEL 02
12.62	0.85		NAA	76GUZ 01	20			OES	75JON 08
12.7		6	POL	72SIN 01	21	11		CPAA	77ZIK 01
12.9		6	AA	72SIN 01	27			OES	75BOL 02
13			OES	75JON 07	30			XRF	80SUZ 02
13		11	AA	79HOE 02	35			EXRF	81PAR 01
13		1	AA	77FRY 01					
13			ICPES	78DAH 01	<u>Dy (ng/g)</u>				
13			AA	83ELA 01					
13	0.1		EXRF	85COE 02	<	100	L	NAA	77LAU 01
13	0.47	11	AA	75ISA 01	53	8		ITNA	77NAD 02
13	1	35	RTNA	77GLA 01	80	7		RTNA	84ODD 01
13	1.7		AA	84KAN 01	86	3		RTNA	86TSU 01
13	4.2		CPXRF	80KIR 01	110			SSMS	78URE 01
13.1		6	ICPMS	83DOU 01	<u>Er (ng/g)</u>				
13.1	0.4		ASV	85ADE 01					
13.1	0.6		AA	73THO 01					
13.2	0.5		SSMS	72MAG 01	<	100		RTNA	77LAU 02
13.3	0.1		ICPES	79HER 01	<	100	D	RTNA	82LAU 01
13.4		6	ICPES	83ERA 02	28	3		RTNA	86TSU 01
13.4	0.5	7	RTNA	84FAR 02	30			SSMS	78URE 01
13.5	0.6	7	RTNA	84FAR 02	31	4		RTNA	84ODD 01
13.5	1.5		ITNA	82QUR 01	<u>Eu (ng/g)</u>				
13.5	1.5		ITNA	79AHM 01	20			ITNA	80CRE 01
13.6	0.5	7	RTNA	84FAR 02	20			SSMS	78URE 01
13.7	1.3	6	EXRF	79MAT 01	20	2		ITNA	78LAU 02
13.8	1.4		XRF	74REU 01	21			RTNA	77LAU 02
14			OES	75JON 03	21		D	RTNA	82LAU 01
14			OES	75JON 04	21	1		ITNA	74RAN 02
14			OES	75JON 11	22	3		ITNA	79KOB 03
14			CPXRF	84KAU 01	22	8		RTNA	80SLO 01
14		6	ICPES	85ABD 01	22.6	2.9		ITNA	85MAD 01
14	0.13	11	AA	75ISA 01	23	1		RTNA	83TJI 01
14	1		EXRF	80DYC 01	24	4		ITNA	77NAD 02
14	2		ITNA	77ZIK 01	25	3		ITNA	83AHM 01
14	4.5	6	ITNA	74HOF 01	26			NAA	77LAU 01
14.5	1		FAA	82KRI 01	26	1		ITNA	81KOS 01
14.5	4.7		ITNA	77HAM 01	26	5		ITNA	84TU 01
15			OES	75JON 05	27	3		ITNA	81KOS 01
15			OES	75ISA 01	27	6		ITNA	81KUL 01
15.5			ITNA	82AKA 01	28	1		RTNA	86TSU 01
15.5			SSMS	81VER 02	28	6.3		ITNA	77HAM 01
16			ICPES	84NAD 01	30	10		RTNA	83SIR 01
16			OES	75JON 09	31	4	6	ITNA	74BEC 01
16			OES	75JON 01	35			ITNA	85MIS 01
16	1		ICPES	84ABD 01	91	5		RTNA	84ODD 01
17			OES	75JON 06	120	20		RTNA	77KUS 01
18	4		ICPES	82AZI 02	300			RTNA	72MOR 03

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>F (ug/g)</u>					<u>Fe (ug/g) cont.</u>				
3.12			COLOR	79DAB 01	260	20		ITNA	78GIL 01
3.6			AA	77TSU 01	260	20		SSMS	84VOS 01
3.69			COLOR	79DAB 01	261			SSMS	81VER 02
3.7			DISE	83ESA 01	261	39.1	11	AA	75ISA 01
3.8	0.32		ISE	79DAB 01	262	5		ICPES	79HER 01
3.88			ISE	79DAB 01	265	54		RTNA	83SIR 01
4	0.3		ISE	82GLA 02	266	21		CPXRF	85CLA 01
4.2	0.4		ISE	84GLA 02	267			ICPES	78DAH 01
4.4	0.3		ISE	83KNA 01	267	2.9		CPXRF	81ROB 02
4.8	1		MS	77STE 02	267	6		ICPES	79MCQ 02
10			CPAA	80HAN 01	270			OES	75BOL 02
					270		11	SSMS	85VOS 01
					270			ITNA	80CRE 01
					270	50	35	ITNA	81GLA 03
121			CPXRF	76ZEI 01	271	6	11	COLOR	82SCH 03
121			CPAA	78MCG 01	271	7		RTNA	77MEL 01
145	4	11	AA	78GAI 01	272	16		AA	73THO 01
151			OES	75JON 09	273	6		ICPES	79MCQ 01
174			OES	75JON 06	274	19		EXRF	79GIA 01
183	22	11	ICPES	81MUN 01	276			OES	75JON 05
190			OES	75JON 02	276	8		EXRF	73GIA 01
190			OES	75JON 11	277	4		ICPES	85LIE 02
205	37		ITNA	81HAB 01	278	11		AA	79MCQ 01
213		6	ICPES	83BRA 02	279	79		RTNA	77KUS 01
213			OES	75JON 03	280			NAA	77LAU 01
220	6	11	AA	78GAI 01	280			AA	83ELA 01
225	58		XRF	77SMI 04	280	10		ITNA	78LAU 02
229			OES	75JON 08	280	26		ITNA	77HAM 01
229	22		XRF	78LIN 01	280	37		ICPES	84ABD 01
232			OES	75JON 04	282			COLOR	72SEI 01
235			AA	76FUK 01	282	21		14NAA	81WIL 02
235			ICPES	78CAP 01	282.3	9.4	11	ASV	84LOC 01
237	13		CHEML	72SEI 01	283	3	11	ICPES	82JON 01
238			AA	76KRI 03	283	23		ITNA	75RIC 01
239			OES	75ISA 01	284			AA	82WIL 04
240	24		SSMS	84VOS 01	285	5		RTNA	80SLO 01
240	330	R	AA	75MAN 01	285	5		ITNA	79DAS 01
245	35		ICPES	79ABE 01	285	9	11	COLOR	82SCH 03
246			FAA	78CAP 01	287			AA	79HIL 01
250			AA	73LOO 03	288	20		ICPES	80SCH 05
250		11	SSMS	85VOS 01	288	20	D	ICPES	80SCH 08
250	30		RTNA	74CAR 03	288.1	7.2	11	ASV	84LOC 01
250	42.5	11	AA	75ISA 01	290			FAA	73SEG 01
253			ITNA	80SAT 01	290			RTNA	72MOR 03
254	9		EXRF	80DYC 01	290	2		AA	84SAT 02
255	5	11	COLOR	82SCH 03	290	6	11	ICPES	82JON 01
256	1		AA	78LIN 01	290	12		PAA	74CHA 01
256	11	11	ICPES	82JON 01	290	15	7	RTNA	80GAL 02
258			ICPES	84NAD 01	290	25	6	NAA	78GAN 01
259			ITNA	78CAP 01	290	30		CPAA	77ZIK 01

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Fe (ug/g) cont.</u>					<u>Fe (ug/g) cont.</u>				
290	30		ITNA	81KUL 01	313			ICPES	81WEI 01
290	30		ITNA	81KOS 01	313		6	ICPES	83BRA 02
290	35		IENA	81KOS 01	314	40		EXRF	75REU 01
290	58		SSMS	84VOS 01	315	25		RTNA	73GOE 01
291	19		EXRF	85COE 02	315	25	D	RTNA	74GOE 01
291	24		VV	81NON 01	316			OES	75JON 01
292		6	ICPES	83BRA 02	316			CPXRF	84KAU 01
292	10		AA	83RAP 01	317	25		ICPES	81KNA 01
293		6	ICPES	85ABD 01	318.4	26.9	6	ITNA	74BEC 01
293		11	AA	79HOE 02	319	32		XRF	74REU 01
293	14		EXRF	77FLO 01	320	25	6	NAA	78GAN 01
293	18		EXRF	79KUE 01	325			ICPES	81GOO 01
294			OES	75JON 10	326			EXRF	82KEE 01
295		11	AA	79HOE 02	326	30		ITNA	77ZIK 01
295	14	11	ICPES	81MUN 01	331.5	118		PAA	76KAT 04
295.7	20.1		ITNA	82COR 01	332	84		PAA	76KAT 02
296			ICPES	83KEI 01	335			EXRF	81OHT 01
296	8		ITNA	82QUR 01	335	14	6	EXRF	79MAT 01
296	8		ITNA	79AHM 01	335	40		ITNA	84NDI 01
296	12		ICPES	81BLA 02	338	16	6	EXRF	79MAT 01
297			AA	81ARA 01	340	28		AA	82HAR 01
297	6		ITNA	85WAH 01	343	6		SSMS	72MAG 01
297	10		FAA	82JEN 02	348	10		14NAA	81WIL 01
298	8		ITNA	83AHM 01	367			OES	75JON 07
298	30		ICPES	85LYO 01	370	45		CPXRF	77CAM 01
298.9	8.1		ASV	84LOC 01	422			CPXRF	75CAM 01
299	1		ITNA	79KOB 03	450	70		ITNA	79REN 03
300			NAA	74BEL 01	500			AE+AF	79ULL 01
300			EXRF	81BIS 01	884			EXRF	81PAR 01
300	14		COLOR	82MOR 01	<u>Ga (ng/g)</u>				
300	17	11	ICPES	82JON 01					
300	23		ITNA	84TU 01		< 160	L	IENA	78WAN 01
300	40		ITNA	76KUC 01		< 500	L	EXRF	79GIA 01
300	45		ITNA	74RAN 02					
300	50		14NAA	80FAA 01	78	25		NAA	76GUZ 01
301	2.5		EXRF	73SPA 01	86			RTNA	72MOR 03
301	8		ICPES	84SOB 01	89.3	3.6		RTNA	80STU 01
303	32		ITNA	79SAT 01	100	10		RTNA	77KUS 01
304	30		ITNA	78FUR 01	<u>Gd (ng/g)</u>				
306			ITNA	79KUC 01					
306	6		EXRF	77NIE 01					
309	17		ITNA	85MAD 01	1.64	0.24		ITNA	77NAD 02
310			ITNA	85MIS 01	12	1		RTNA	84ODD 01
310			XRF	78CAM 02	81	10		RTNA	86TSU 01
310	31		SSMS	84VOS 01	100		D	RTNA	82LAU 01
310	54		FAA	77FUJ 01	100			RTNA	77LAU 02
311.1	10.4		NAA	76GUZ 01	100			SSMS	78URE 01
312	11		POL	74MAI 01	111	38		RTNA	83TJI 01
312	11.4		POL	72MAI 01					
312	11.4		POL	77MAI 01					

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ge (ng/g)</u>					<u>Hg (ng/g) cont.</u>				
<	400	L	EXRF	79GIA 01	146	12		RTNA	82LO 01
150		H	ICPES	82HAH 01	146	17		NAA	76GUZ 01
					148	10	7	RTNA	72HEI 01
<u>H (%)</u>					148	16		CVAA	82SUL 01
5.54	0.08		TCGS	79FAI 01	150			AA	83ELA 01
5.6	0.1		TCGS	79AND 01	150	5		CVAA	81NAR 01
5.91	0.3		CB	82GLA 02	150	5.1		FAA	72LYO 01
6.05	0.07		CB	80SCH 02	150	10		AA	84STO 01
6.1	0.1	35	TCGS	79GLA 04	150	10		RTNA	83BRA 01
					150	10		FAA	83YAN 01
<u>H2O- (%)</u>					150	17		CVAA	74FIT 01
11.4		D	GRAV	85NAR 03	150	18		ITNA	82LIN 01
11.4			GRAV	84NAR 01	150	40		RTNA	83SIR 01
					151	7		RTNA	84DRA 01
<u>Hf (ng/g)</u>					152	5	2	CVAA	79KNE 01
13			RTNA	80SLO 01	152	6		RTNA	76MEL 01
23			NAA	77LAU 01	152	6		CVAA	80TON 01
27			ITNA	80CRE 01	153	8		CVAA	80KOR 01
28	2		ITNA	85WAH 01	153	14		FAA	75KOI 01
31	4		ITNA	78LAU 02	154	5		RTNA	74ORV 01
34			ITNA	85MIS 01	154	13		FAA	76DOG 01
37	5		ITNA	74RAN 02	154	13		CVAA	78DOG 01
46	12		ITNA	85MAD 01	154	16	5	RTNA	80GRE 01
					154	20	7	RTNA	80GAL 02
<u>Hg (ng/g)</u>					154	20		RTNA	78GIL 01
110	30		RTNA	77BAN 03	154	28		FAA	74CHU 03
120	10	D	RTNA	74GOE 01	155	3		RTNA	72RAI 01
120	10		RTNA	73GOE 01	155	5.6		RTNA	72ROO 02
120	10		CVAA	84BAR 02	155	6		RTNA	72ROO 01
120	20		RTNA	80SLO 01	155	6	11	CVAA	77TAG 01
122		11	CVAA	79HOE 02	155	13	5	RTNA	80GRE 01
122	28		ITNA	84TU 01	155	15		RTNA	73TJI 01
125			AA	74RIC 01	157	1		AF	81EBD 01
125			IDMS	74RIC 01	157	20		CVAA	82GLA 02
130			CVAA	80NAD 01	158			ITNA	80SAT 01
130			CVAA	83MAR 05	158			CVAA	84LAU 01
138	2	11	CVAA	77TAG 01	158			RTNA	74RIC 01
140			ICPES	84MAR 01	158	5		RTNA	72LYO 01
140	10		NAA	77JER 01	158	10		FAA	77GLA 03
140	10		PAA	74CHA 01	158	16		RTNA	82LIN 01
140	10		ITNA	74FRI 01	159	21		CVAA	78MAT 01
140	20		IDMS	72RAI 01	160			RTNA	79DES 01
141	9		SSMS	74ALV 01	160	6		CVAA	72RAI 01
142	27		CVAA	82DOO 01	160	10		ITNA	83AHM 01
146			UU	74FEL 01	160	12		FAA	74SIE 02
146	6		FAE	76CAV 01	160	12		FAA	72ROO 01
					160	20		FAA	79STO 01
					160	20		CVAA	82CHA 01
					160	20		FAA	82JEN 02
					160	30		RTNA	80VAL 01

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Hg (ng/g) cont.</u>					<u>I-129 (fCi/g)</u>				
160	40	6	POT	82JAG 01	0.006	0.0028		RTNA	79BRA 01
160	70		ITNA	81KUL 01					
161	13		RTNA	75LIT 01					
162	10	7	RTNA	72HEI 01					
163	6	17	CVAA	77TAG 01	1.23	0.11		RTNA	74RAV 01
163	12		RTNA	82GRI 01	1.6	0.1		RTNA	78KOB 01
165	5	35	CVAA	81GLA 04	1.8	0.8		RTNA	77KUS 01
165	25		ITNA	85WAH 01	2	0.2		ITNA	85WAH 01
167			ITNA	74RIC 01					
168	10		ITNA	79AHM 01					
168	10		ITNA	82QUR 01					
170	12		CVAA	82LIN 01					
175	5	17	CVAA	77TAG 01				RTNA	74CAR 03
180	10		ITNA	78FUR 01					
180	20		ITNA	74RAN 02					
180	30		RTNA	77MEL 01	1.05	1.406	RD	ITNA	79IMA 03
180	40	6	POT	82JAG 01	1.05	1.41	R	ITNA	79IMA 01
190			ITNA	75RIC 01	1.11			OES	75JON 05
190	10		NAA	78GAN 01	1.19			OES	75JON 09
190	30	6	ITNA	74BEC 01	1.2		6	ICPES	83BRA 02
190	40		CVAA	77AND 01	1.229	0.018		CPXRF	81ROB 02
200	20		ITNA	81KOS 01	1.25		6	ICPES	83BRA 02
200	30		PAA	80SEG 01	1.26			OES	75JON 03
200	30		ITNA	81HAB 01	1.28			OES	75JON 11
200	80		ITNA	74GUI 01	1.3	0.2		14NAA	77SEG 01
203	11	17	CVAA	77TAG 01	1.33	0.01		ICPES	84ABD 01
210	50		ITNA	77ZIK 01	1.35		1	AA	78SZY 01
240		17	CVAA	77TAG 01	1.35			OES	75JON 04
305	70		ITNA	75LIT 01	1.36	0.01	11	AA	78GAI 01
					1.37			ITNA	80CRE 01
					1.37	0.06		ITNA	74RAW 02
					1.37	0.06		ITNA	84NDI 01
					1.37	0.14		IENA	79JON 01
					1.374		1	AA	78SZY 01
					1.38			OES	75ISA 01
					1.38	0.04		ITNA	75RIC 01
					1.39			CPAA	80HAN 01
					1.4			ITNA	82AKA 01
					1.4			ICPES	84NAD 01
					1.4		6	ICPES	85ABD 01
					1.4			OES	75JON 02
					1.4	0.01	11	AA	78GAI 01
					1.4	0.06		ITNA	78LAU 02
					1.4	0.098	6	NAA	78GAN 01
					1.4	0.2	35	ITNA	81GLA 04
					1.41			OES	75JON 07
					1.41			AA	77BRU 01
					1.41	0.03		TCGS	79AND 01
					1.41	0.09		CPXRF	85CLA 01
					1.42			EXRF	81BIS 01
<u>I (ng/g)</u>									
100	50		PAA	78HIS 01					
100	50		PAA	77WIL 01					
160	20		IENA	82SAT 01					
167	10		RTNA	77ROO 01					
173.2	4.4		RTNA	80GVA 01					
183	6	17	NAA	79HEC 01					
188	26		NAA	79BRA 01					
190	70		IENA	84FAR 01					
192	10		RTNA	83TAK 02					
200	70		RTNA	77STE 02					
220		17	NAA	79HEC 01					

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>K (%) cont.</u>					<u>K (%) cont.</u>				
1.42			ITNA	78CAP 01	1.57	0.08		EXRF	75REU 01
1.42	0.04		ITNA	81KOS 01	1.57	0.25		14NAA	81WIL 01
1.42	0.09		ITNA	76KUC 01	1.58	0.08	6	NAA	78GAN 01
1.42	0.23		ITNA	84TU 01	1.59			OES	75JON 10
1.43		6	ICPES	83BRA 02	1.62			OES	75JON 06
1.43	0.04		EXRF	79KUE 01	1.65			ITNA	84TU 03
1.43	0.06		FE	78KOR 01	1.66	0.8	6	EXRF	79MAT 01
1.43	0.07	11	ICPES	82JON 01	1.67	0.03	6	ICPES	85ABD 01
1.4375	0.0794		NAA	76GUZ 01	1.7	0.07		ICPES	79HER 01
1.44	0.0004	11	AA	75ISA 01	1.74	0.04		EXRF	80DYC 01
1.44	0.04		RTNA	76MEL 03	1.81	0.08	6	EXRF	79MAT 01
1.445	0.11		PAA	76KAT 04	3.89			EXRF	81PAR 01
1.45			ITNA	79KUC 01	<u>La (ug/g)</u>				
1.45			ICPES	79COO 01	0.7	0.1		ITNA	77ZIK 01
1.45	0.0003	11	AA	75ISA 01	0.8	0.05		RTNA	80SLO 01
1.45	0.02		AA	82HAR 01	0.88	0.07		RTNA	83SIR 01
1.45	0.03	11	ICPES	81MUN 01	0.89	1.25	R	ITNA	79IMA 01
1.45	0.08		PAA	76KAT 02	0.89	1.25	RD	ITNA	79IMA 03
1.46	0.02		ITNA	85WAH 01	0.95			ITNA	79KUC 01
1.46	0.07		ITNA	83AHM 01	0.98			ITNA	80CRE 01
1.46	0.07		ITNA	79AHM 01	0.99	0.08	6	ITNA	74BEC 01
1.46	0.11		EXRF	82DAK 01	1.0			RTNA	77LAU 02
1.46	0.14		14NAA	80FAA 01	1.0			NAA	77LAU 01
1.46	0.2		14NAA	81WIL 02	1.0			NAA	74BEL 01
1.47			NAA	77LAU 01	1.0		D	RTNA	82LAU 01
1.47	0.02	11	ICPES	82JON 01	1.1		11	SSMS	85VOS 01
1.47	0.07	11	ICPES	82JON 01	1.1	0.1		ITNA	78LAU 02
1.47	0.1		ITNA	79REN 03	1.145	0.058		RTNA	86TSU 01
1.47	0.12		ITNA	79KOB 03	1.15	0.1		IENA	81KOS 01
1.48			AA	79HIL 01	1.17	0.15		ITNA	84TU 01
1.48			ICPES	81WEI 01	1.18	0.09		ITNA	81KOS 01
1.49		1	IENA	79KUC 01	1.2			RTNA	72MOR 03
1.49	0.03		ITNA	78GIL 01	1.2			ITNA	78CAP 01
1.49	0.04		TCGS	79FAI 01	1.2			SSMS	78JRE 01
1.49	0.194		ITNA	77HAM 01	1.2	0.1		RTNA	76MEL 03
1.496	0.043		ITNA	78FUR 01	1.2	0.1		ITNA	81KUL 01
1.5			ITNA	78KEL 02	1.2	0.165		ITNA	77HAM 01
1.5			RTNA	72MOR 03	1.2	0.3		ITNA	83AHM 01
1.5			ITNA	76BAT 01	1.209	0.039		RTNA	83TJI 01
1.5	0.05	11	ICPES	81MUN 01	1.22	0.02		VV	81NON 01
1.5	0.08		VV	81NON 01	1.23	0.02		NM	85KAT 02
1.51			CPXRF	84KAU 01	1.23	0.05		ITNA	84NDI 01
1.51			XRF	78CAM 02	1.24	0.08		ITNA	79REN 03
1.51	0.06		CPXRF	80KIR 01	1.24	0.18		ITNA	85MAD 01
1.51	0.06		EXRF	77NIE 01	1.26	0.2		ITNA	85KAT 02
1.54			OES	75JON 08	1.27			ITNA	85MIS 01
1.54	0.03		ITNA	80SLO 01	1.27	0.33		ITNA	84ODD 01
1.55	0.8		XRF	78STA 02	1.3	0.1		ITNA	74RAN 02
1.56	0.05	11	ICPES	82JON 01					

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>La (ug/g) cont.</u>					<u>Mg (ug/g) cont.</u>				
1.4			NM	83KAT 01	5640	420		AA	86GAU 01
1.44	0.2		RTNA	84ODD 01	5700			OES	75JON 05
1.7	0.6		RTNA	77KUS 01	5700	60		ICPES	79MCQ 02
1.96	0.02		ITNA	77NAD 02	5700	80		ICPES	79MCQ 01
<u>Li (ng/g)</u>					5800	100	11	AA	78GAI 01
<	900	L	CPAA	81SAS 01	5800	300		ICPES	85LYO 01
500	80		AA	84GLA 11	5800	730		ITNA	77HAM 01
510	660	R	AA	75MAN 01	5900			ICPES	84NAD 01
570	70		AA	84GLA 02	5900	1	11	AA	75ISA 01
770	30		ITNA	77HEY 01	5900	300		AA	84GLA 11
800	200		CPAA	80HAN 01	5922	172	11	ICPES	81MUN 01
830			AA	85GAU 04	5960			CPXRF	84KAU 01
13700	1500		NT	74CAR 02	5980	70	11	ICPES	82JON 01
14000	1000		RTNA	85YAN 01	6000			RTNA	72MOR 03
<u>Lu (ng/g)</u>					6000			OES	75JON 09
0.61	0.09		ITNA	77NAD 02	6000			OES	75JON 07
0.9	0.1		ITNA	81KOS 01	6000	2	11	AA	75ISA 01
2.9	0.2		RTNA	83TJI 01	6000	100	11	AA	78GAI 01
2.9	0.8		RTNA	86TSU 01	6000	200	11	ICPES	82JON 01
3.3		D	RTNA	82LAU 01	6100	500		14NAA	80FAA 01
3.3			RTNA	77LAU 02	6100	500		ITNA	78LAU 02
4	2		RTNA	83SIR 01	6100			CPXRF	80KIR 01
6			RTNA	80SLO 01	6100			OES	75JON 10
8.4	0.7		RTNA	84ODD 01	6100	100		AA	79HIL 01
8.5	1.3		ITNA	83AHM 01	6100	200		ICPES	83KEI 01
10			SSMS	78URE 01	6100	200	11	PAA	74CHA 01
<u>Mg (ug/g)</u>					6100	400		PAA	78HIS 01
4000	6250	R	ITNA	79IMA 01	6100	200	11	ICPES	82JON 01
4000	6250	RD	ITNA	79IMA 03	6100	400		ITNA	80SLO 01
4900			ICPES	78CAP 01	6100	1100		14NAA	81WIL 02
4900		6	ICPES	83BRA 02	6150			ICPES	78DAH 01
4915			ICPES	81GOO 01	6150	70		PAA	76KAT 02
5140	190		VV	81NON 01	6150	100		PAA	76KAT 04
5300			FAA	78CAP 01	6173.8	179		NAA	76GUZ 01
5400			NAA	77LAU 01	6174	173		ITNA	75PIE 01
5400	100		ICPES	85LIE 02	6200			OES	75JON 02
5500			AA	80URE 01	6200			OES	75JON 08
5500		6	ICPES	85ABD 01	6200		6	ICPES	83BRA 02
5500	300		ICPES	79ABE 01	6200	100	11	ICPES	82JON 01
5500	300		ICPES	79JON 01	6200	200	6	ICPES	85ABD 01
5600			AA	77BRU 01	6200	400		ICPES	84ABD 01
5600			ITNA	84TU 03	6221	153	11	ICPES	81MUN 01
5600		6	ICPES	83BRA 02	6258	315		ITNA	77ZIK 01
5600	100		AA	79MCQ 01	6300			ITNA	78CAP 01
					6300	130		ITNA	78FUR 01
					6300	700		TCGS	79FAI 01
					6400			OES	75ISA 01
					6400			ICPES	81WEI 01
					6500			OES	75JON 06
					6500	100		COLOR	74SLE 01

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Mg (ug/g) cont.</u>					<u>Mn (ug/g) cont.</u>				
6500	100		AA	82HAR 01	84			NAA	77LAU 01
6550	480		ITNA	79KOB 03	84	1	11	ICPES	82JON 01
6600			OES	75JON 11	84	4		ITNA	78LAU 02
6680			AF	85DAV 01	85			ITNA	78CAP 01
6700			CPAA	80HAN 01	85	2	11	ICPES	82JON 01
6700	100		ICPES	79HER 01	85	4		EXRF	80DYC 01
6800			OES	75JON 03	85	10	6	EXRF	79MAT 01
6800			OES	75JON 04	85.6	2.8	6	ITNA	74HOF 01
6800	1000		14NAA	77SEG 01	86			AA	76FUK 01
7000			ITNA	76BAT 01	86			ASV	80CHR 01
7030	170		14NAA	81WIL 01	86			RTNA	72MOR 03
7100			OES	75JON 01	86			ITNA	84GLA 02
7830			ITNA	75RIC 01	86		6	ICPES	83CHA 01
<u>Mn (ug/g)</u>					86	1		ICPES	79MCQ 02
23.1	4.4	6	ITNA	74HOF 01	86	2		ICPES	79MCQ 01
32	16		EXRF	77FLO 01	86	2		ICPES	83SCH 04
52			OES	75JON 07	86	2	11	ICPES	82JON 01
54	11		SSMS	84VOS 01	86.5	4.9		EXRF	79GIA 01
65	90	R	ITNA	79IMA 01	86.8	6.7		ICPES	85LYO 01
65	90	RD	ITNA	79IMA 03	86.8	7.2	11	ICPES	81MUN 01
68.2	8.2		XRF	77SMI 04	87		11	SSMS	85VOS 01
71.8		6	ICPES	83BRA 02	87			AA	79HOE 02
72			OES	75JON 06	87			FAA	73SEG 01
72	1	11	AA	78GAI 01	87.1	1.6		RTNA	73HEY 01
73.5			ITNA	82AKA 01	87.3	8.8		ICPES	82AZI 01
76	10		ICPES	82AZI 02	87.8	5.9		RTNA	74RAV 01
77			SSMS	81VER 02	88			OES	75JON 02
79	3		RTNA	76MEL 03	88			OES	75JON 04
80			AA	73LOO 03	88	1		AA	84SAT 02
80			ICPES	78CAP 01	88	2		AA	82HAR 01
80			OES	75JON 11	88	3	7	RTNA	84FAR 02
80			OES	75ISA 01	88	3	7	RTNA	84FAR 02
80	3		XRF	78LIN 01	88	4		ICPES	85LIE 02
80.6	2.9		CPXRF	81ROB 02	88	4.4	11	AA	75ISA 01
80.7	3.3		ITNA	81HAB 01	88.2	3.4		PAA	74CHA 01
81	4		RTNA	77KUS 01	88.6	2.2		EXRF	73GIA 01
81.3			FAA	78CAP 01	88.8		11	AA	79HOE 02
81.9		6	ICPES	83BRA 02	89	0.6		ICPES	79HER 01
82		11	SSMS	85VOS 01	89	1	11	ICPES	82JON 01
82			EXRF	82KEE 01	89	2.67	11	AA	75ISA 01
82	3		ITNA	79JON 01	89	3	D	ICPES	80SCH 08
82	4.2		AA	78LIN 01	89	3		VV	80SCH 05
82	7		EXRF	79KUE 01	89	4		ITNA	74RAN 02
82	99	R	AA	75MAN 01	89	4		AA	79MCQ 01
82.7			ICPES	84NAD 01	89	4.4		ITNA	79KOB 03
82.9	5.1		RTNA	83DAN 01	89	5		ITNA	78GIL 01
83.3			ICPES	78DAH 01	89	5		FAA	84ROS 01
83.4			FAA	77SHE 02	89.4	7		EXRF	85COE 02
					89.9	1.4	11	ASV	84LOC 01
								ITNA	76BAT 01

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Mn (ug/g) cont.</u>					<u>Mn (ug/g) cont.</u>				
90			ITNA	80CRE 01	96			ICPES	81JEL 01
90		6	ICPES	83BRA 02	96			ICPES	81GOD 01
90	0.9	11	AA	78GAI 01	96			OES	75JON 03
90	1		ITNA	80SLO 01	96	5		PAA	78HIS 01
90	3		ICPES	79ABE 01	96.2	4.8		AA	76GAL 01
90	4	7	RTNA	84FAR 02	96.8	3.6		AA	73THO 01
90	6		ITNA	76KUC 01	97			OES	75JON 10
90	7		ITNA	77HAM 01	97			CPXRF	84KAU 01
90	12		CPXRF	77CAM 01	97	10		ITNA	77ZIK 01
90	16		SSMS	84VOS 01	97.4			CPXRF	75CAM 01
90.9	4.7		ASV	84LOC 01	98			XRF	80SUZ 02
91			EXRF	81BIS 01	98	20		ICGS	79FAI 01
91	0.8	11	ASV	84LOC 01	98.9	11		CPXRF	85CLA 01
91	2		ITNA	85WAH 01	99	12		SSMS	84VOS 01
91	2	6	NAA	78GAN 01	100			ITNA	78KFL 02
91	4		FAA	79WES 01	101			OES	75JON 01
91	4		ICPES	84ABD 01	101	5		ICPES	84SOB 01
91.1	10.9		ITNA	85MAD 01	101	10		XRF	74PEU 01
91.1	18		EXRF	75REU 01	103	5		VV	81NQN 01
91.5			AA	83FAG 01	104	9		ITNA	84HOI 01
91.6	1.08		NAA	76GUZ 01	106	3	3	ICPES	85ABD 01
92			AA	76KRI 03	107			ITNA	84TU 03
92		6	ICPES	83CHA 01	107	3		SSMS	72MAG 01
92	1	D	DCPES	81REE 01	110			ITNA	79REN 03
92	1		DCPES	79REE 01	110	9	6	EXRF	79MAT 01
92	3		ITNA	78FUR 01	131			OES	75JON 08
92	3		ITNA	75RIC 01	144			OES	75JON 09
92	3		AA	83RAP 01	242			EXRF	81PAE 01
92	4	35	ITNA	81GLA 04	<u>Mo (ng/g)</u>				
92	17		SSMS	84VOS 01	110	80	11	ICPES	82JON 01
92.4	0.8		ICPES	81KNA 01	200		11	SSMS	85VOS 01
92.8	4		ITNA	83AHM 01	200			FAA	79SEN 01
93			AA	83ELA 01	200	100	11	ICPES	82JON 01
93			ITNA	80SAT 01	200	100	11	ICPES	82JON 01
93			XRF	78CAM 02	200	200	11	ICPES	82JON 01
93			OES	75JON 05	230	20		COLOR	83MAT 02
93	6		EXRF	77NIE 01	240	20		RTNA	78HAD 01
93	8		XRF	78STA 02	240	21		RTNA	82HAD 01
93.8	17.2		PAA	80YAM 01	250		1	ITNA	79KUC 01
94	3.5	6	NAA	78GAN 01	260	20		FAA	84GDR 01
94.5	5		PAA	76KAT 04	270	9		RTNA	85TIA 01
94.8	4		ITNA	79AHM 01	280	20		ICPES	82LYO 01
94.8	4		ITNA	82QUR 01	280	30		RTNA	83DAN 01
95		6	ICPES	85ABD 01	300	30	D	RTNA	74GDE 01
95			AE+AF	79ULL 01	300	30		RTNA	73GDE 01
95	4		PAA	76KAT 02	300	60		RTNA	77DIK 01
95	7.3		CPXRF	80KIR 01	320		1	ITNA	79KUC 01
95	12		ITNA	79SAT 01	320	60		RTNA	80SLO 01
95.4	2.1		ITNA	76GAL 01					
95.7	2	11	ICPES	81MUN 01					

TABLE 15.1-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Mo (ng/g) cont.</u>					<u>Na (ug/g)</u>				
320	80		RTNA	84MOK 02	40			OES	75JON 03
327	70		NAA	76GUZ 01	45.8	6	11	ICPES	81MUN 01
390	40		FAA	81NEU 01	50.5	1	11	ICPES	81MUN 01
400	30		RTNA	83SIR 01	66	6		ICPES	85LIE 02
400	100		PAA	80SEG 01	74			OES	75JON 06
410			POL	83BOU 01	75			NAA	77LAU 01
410			AA	83BOU 01	76			NAA	74BEL 01
2260	210		PAA	74CHA 01	76	34	6	ICPES	85ABD 01
2300			OES	75JON 10	77			RTNA	72MOR 03
3300			OES	75JON 11	77	4		RTNA	76MEL 03
4000	2000		CPAA	77ZIK 01	77	6		ITNA	80SLO 01
4600			OES	75JON 03	78	3		ITNA	74RAM 02
6200			OES	75JON 01	78	5		ITNA	76KUC 01
10500			OES	75JON 07	79.2	1.8		ITNA	84NDI 01
15200			OES	75JON 02	79.3	5		PAA	74CHA 01
					80			ITNA	78LAU 02
					80			ITNA	84TU 03
					80	2		FE	81NIZ 01
					80	3		ITNA	85WAM 01
					80.6	1.3		FE	78KOR 01
					81			ICPES	81GOO 01
					81			ITNA	79KUC 01
					81	17		ITNA	78FUR 01
					81.5	3		ITNA	79AHM 01
					81.6	3		ITNA	83AHM 01
					81.8	1.83		NAA	76GUZ 01
					82		1	IEWA	79KUC 01
					83	5		ITNA	75RIC 01
					83	8.5		ITNA	77HAM 01
					84	4		ITNA	78GIL 01
					84.4			ITNA	76BAT 01
					86	1		VV	81NON 01
					86	5		ITNA	77ZIK 01
					87			CPAA	80HAN 01
					87	11		PAA	76KAT 02
					87	16		PAA	76KAT 04
					88	6.8		ITNA	79KOB 03
					88	142	R	ITNA	79IMA 01
					88	142	RD	ITNA	79IMA 03
					89	17		AA	82HAR 01
					90	8		ITNA	81KOS 01
					92			ITNA	80CRE 01
					92		35	ITNA	81GLA 04
					93	14		ICPES	84ABD 01
					99.8	6.7		ITNA	85MAD 01
					100			OES	75JON 01
					100			OES	75JON 05
					101		6	ICPES	85ABD 01
					103.5			ITNA	82AKA 01
					110		35	ITNA	81GLA 03
<u>N (%)</u>									
2.59	0.11		CB	82GLA 02					
2.61	0.05		14NAA	80FAA 01					
2.62	0.03		CB	80SCH 02					
2.7	0.01	11	TITR	82LIA 01					
2.7	0.09	13	NT	74CAR 01					
2.7	0.09		TCGS	79FAI 01					
2.7	0.4	35	TCGS	79GLA 04					
2.7	0.4		14NAA	77SEG 01					
2.71	0.91		TITR	80GIN 01					
2.72		11	TITR	82LIA 01					
2.74	0.01	11	TITR	82LIA 01					
2.74	0.01		COLOR	80GIN 01					
2.74	0.02	11	TITR	82LIA 01					
2.75	0.03	11	TITR	82LIA 01					
2.755	0.038		GRAV	74CAR 01					
2.76	0.09	13	NT	74CAR 01					
2.81	0.15		TCGS	79AND 01					
<u>N-15 (atom %)</u>									
0.367	0.002		MS	73CAR 01					

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Na (ug/g) cont.</u>					<u>Ni (ug/g) cont.</u>				
114	2		NAA	78GAN 01	1.2	0.4		FAA	82GRO 01
120	40		ITNA	79REN 03	1.2	0.5		EXRF	79GIA 01
123			ICPES	84NAD 01	1.2	1		EXRF	77NIE 01
130		11	SSMS	85VOS 01	1.2	1		EXRF	85COE 02
140	12		ICPES	79ABE 01	1.24	0.07	11	ICPES	82JON 01
150			OES	75JON 04	1.264	0.052		FAA	84GRE 01
154			OES	75JON 09	1.27	0.08	11	ICPES	82JON 01
155			ITNA	78CAP 01	1.27	0.08		PAA	74CHA 01
162		1	AA	78SZY 01	1.28	0.16		NAA	76GUZ 01
170	30		IENA	79JON 01	1.3			AA	73LOO 03
200			AA	77BRU 01	1.3	0.07		VOLT	81PIH 01
206	21		ICPES	84SOB 01	1.3	0.1		AA	84SAT 02
244		1	AA	78SZY 01	1.3	0.1		HPLC	83ICH 01
400			OES	75JON 11	1.3	0.1		RTNA	75ABU 01
524			OES	75JON 08	1.3	0.2	9	ITNA	78LAU 02
<u>Nb (ug/g)</u>					1.3	0.4		EXRF	73GIA 01
<	0.3	L	PAA	78HIS 01	1.3	0.5	11	ICPES	81MUN 01
<u>Nd (ng/g)</u>					1.3	0.6		ICPES	84SOB 01
320	90		ITNA	77NAD 02	1.31	0.11		ITNA	75PIE 01
407	20		ITNA	84ODD 01	1.31	0.17		FAA	80DOR 01
420	90		RTNA	83SIR 01	1.32	0.02		ASV	85ADE 01
423	9		RTNA	84ODD 01	1.33	0.07		VOLT	84ADE 02
480			SSMS	78URE 01	1.36	0.11		FAA	86GAU 01
570			RTNA	77LAU 02	1.37	0.03		COLOR	77BUR 01
570		D	RTNA	82LAU 01	1.38			POL	85UTO 01
582	48		RTNA	86TSU 01	1.4			FAA	82HOE 01
600		11	SSMS	85VOS 01	1.4		1	FAA	73SEG 01
765	51		RTNA	83TJI 01	1.4			IENA	79KUC 01
<u>Ni (ug/g)</u>					1.4	0.1		POL	72MAI 01
0.7			CPXRF	75CAM 01	1.4	0.1		POL	74MAI 01
0.95		11	SSMS	85VOS 01	1.4	0.1		POL	77MAI 01
1		1	IENA	79KUC 01	1.4	0.3		RTNA	77MEL 01
1.1		16	AA	79ABO 01	1.4	0.4		XRF	78STA 02
1.1			AA	83ELA 01	1.4	0.6		ITNA	74RAN 02
1.1	0.1	6	ICPES	85ABD 01	1.5	0.2		PAA	80SEG 01
1.1	0.5		AA	83RAP 01	1.5	0.3		EXRF	80DYC 01
1.14	0.08		FAA	79STO 01	1.5	0.3		PAA	80YAM 01
1.15	0.07	11	ICPES	82JON 01	1.5	0.7		RTNA	80SLO 01
1.15	0.09	11	ICPES	82JON 01	1.6		11	CPXRF	85CLA 01
1.18	0.08		AA	80AGE 01	1.6	0.4		AA	85VOS 01
1.2			XRF	78CAM 02	1.6	0.1		ICPES	78RIT 01
1.2			FAA	85LON 01	1.7	0.1		DCPES	79REE 01
1.2	0.063	6	COLOR	78FUD 01	1.7	0.1		DCPES	81REE 01
1.2	0.07	6	COLOR	78FUD 01	1.8			CPXRF	84KAU 01
					1.8			POL	83HOL 01
					1.8	0.2		ICPES	79ABE 01
					2			NAA	77LAU 01
					2.1	0.1		ICPES	79HEF 01
					2.2	0.7		ICPES	84HAI 01
					2.6	1		CPXRF	80KIR 01

TABLE 15/1-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>P (ug/g) cont.</u>					<u>P (ug/g) cont.</u>				
2100			CPXRF	77CAM 01	2100			OES	75JON 02
2100			KE+AT	79ULL 01	2100			FAA	79EDI 01
2100			AA	79MOM 01	2100			OES	75JON 09
2100		6	AA	79ABC 01	2100		6	ICPES	83BRA 02
2100	80	12	ICPES	84ABD 01	2100	80	12	FAA	78EDI 01
2100	100				2100	100		14NAA	80FAA 01
2100	130	7	NM		2100	130	7	NM	81SHI 01
2110	110	7	NM		2110	110	7	NM	81SHI 01
2130	20		ICPES		2130	20		ICPES	79HER 01
2160	50	12	FAA		2160	50	12	FAA	78EDI 01
2190	110	7	NM		2190	110	7	NM	81SHI 01
2200			EXRF		2200			EXRF	81OHT 01
2300			OES		2300			OES	75JON 08
2380	180		EXRF		2380	180		EXRF	75REU 01
2400			OES		2400			OES	75JON 03
2400	100	6	ICPES		2400	100	6	ICPES	85ABD 01
2400	200		ICPES		2400	200		ICPES	85LYO 01
2500	400		14NAA		2500	400		14NAA	77SEG 01
2600		6	ICPES		2600		6	ICPES	83BRA 02
2600		6	ICPES		2600		6	ICPES	85ABD 01
3100			OES		3100			OES	75JON 01
<u>Pb (ug/g)</u>					<u>Pb (ug/g)</u>				
15	5.1		CPXRF	80KIR 01	15	5.1		CPXRF	80KIR 01
17.6			SSMS	81VER 02	17.6			SSMS	81VER 02
24	7		SSMS	84VOS 01	24	7		SSMS	84VOS 01
26			AA	76FUK 01	26			AA	76FUK 01
26	7		SSMS	84VOS 01	26	7		SSMS	84VOS 01
28.5	3.6		FAA	77FUJ 01	28.5	3.6		FAA	77FUJ 01
31	2		ICPES	81NAD 01	31	2		ICPES	81NAD 01
33.6	1.5		FAA	77BRU 01	33.6	1.5		FAA	77BRU 01
34	7		SSMS	84VOS 01	34	7		SSMS	84VOS 01
37			AA	73LOO 03	37			AA	73LOO 03
37	8		SSMS	84VOS 01	37	8		SSMS	84VOS 01
37.3	7		XRF	78STA 02	37.3	7		XRF	78STA 02
38	3		FAA	77LOR 01	38	3		FAA	77LOR 01
39	1		ASV	85ADE 01	39	1		ASV	85ADE 01
40			AA	83ELA 01	40			AA	83ELA 01
40		11	SSMS	85VOS 01	40		11	SSMS	85VOS 01
40	2		EXRF	73SPA 01	40	2		EXRF	73SPA 01
40	3		AA	82ROD 03	40	3		AA	82ROD 03
40	4		PAA	78HIS 01	40	4		PAA	78HIS 01
40.2		11	HAA	84KUM 01	40.2		11	HAA	84KUM 01
40.7	3		EXRF	79GIA 01	40.7	3		EXRF	79GIA 01
41			ICPES	78DAH 01	41			ICPES	78DAH 01
41	0.6		ICPES	84ABD 01	41	0.6		ICPES	84ABD 01
41	1		ICPES	79HER 01	41	1		ICPES	79HER 01
41	2		ICPES	85LIE 02	41	2		ICPES	85LIE 02
41	2		AA	84GLA 02	41	2		AA	84GLA 02

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Pb (ug/g) cont.</u>					<u>Pb (ug/g) cont.</u>				
41	3		AA	84SAT 02	45		6	FAA	81JAC 01
41.5			ICPES	85NAR 02	45	0.5		AA	73TAL 01
41.8	1.1		HPLC	83ICH 01	45	2		PAA	74LUT 01
42		6	ICPMS	83DOU 01	45	3.6		AA	79MON 01
42			ICPES	84MAR 01	45.1			CPXRF	84KAU 01
42			FAA	82HOE 01	45.1	2.5		AA	84STO 01
42		11	SSMS	85VOS 01	45.3			CPXRF	75CAM 01
42			FAA	78URE 02	45.3	0.7		FAA	79DAB 02
42	1		ICPES	79MCQ 02	45.3	0.9		FAA	81KIT 01
42	1.7		AA	80AGE 01	45.3	1.13		FAA	82VAN 01
42	3		ICPES	79MCQ 01	45.4	2		EXRF	73GIA 01
42	4		ITNA	77GUI 02	45.5	0.4	6	FAA	84FUD 01
42	4		NAA	76MIL 02	45.5	0.7	6	FAA	84FUD 01
42	9		14NAA	81WIL 02	45.5	1		RTNA	72GIB 01
42.1		11	HAA	84KUM 01	45.7	1.3		ASV	84LOC 01
42.2		11	FAA	79HOE 02	45.8		6	DCPES	84SNE 01
42.8	3.1	11	ASV	84LOC 01	45.9	0.14		FAA	79STO 01
42.9		11	FAA	79HOE 02	45.9	1.2	11	ASV	84LOC 01
43			FAA	80PRE 01	46		6	DCPES	84SNE 01
43			SSMS	74LUT 01	46			FAA	82PRE 01
43			EXRF	84PIN 01	46	1	11	ICPES	82JON 01
43	2		POT	84PIN 01	46	2		AA	77YAN 01
43.2	5.1		FAA	82JEN 02	46	2		FAA	79KRA 01
43.3			AA	76KRI 03	46	2		AA	80SCH 05
43.4		6	POL	72SIN 01	46	2	D	FAA	80SCH 08
43.7	0.9		HAA	76VIJ 01	46	52	R	AA	75MAN 01
44			FAA	79HEI 03	46.1	7		CPXRF	85CLA 01
44			FAA	73SEG 01	46.2	3.5	11	ICPES	81MUN 01
44	2		NAA	77JER 01	46.4			AA	74BOP 01
44	2		FAA	80LEG 01	46.5		16	AA	79ABO 01
44	2		AA	75ABU 01	46.5	1.3		XRF	85AVA 01
44	2	11	ICPES	82JON 01	46.8	5.6		HAA	82WEI 01
44	2.3	6	POL	72SIN 01	47			AA	79HIL 01
44	4		FAA	81KNA 01	47			ICPES	81WEI 01
44	5		FAA	84ROS 01	47		6	FAA	81JAC 01
44	6		FAA	84GLA 11	47	0.5		IDMS	83BRO 01
44.1	3.1	11	ICPES	81MUN 01	47	2.5		ASV	79BRI 02
44.1	4		AA	83RAP 01	47	4		ICPES	79ABE 01
44.2	2.1		PAA	74CHA 01	47	5		ASV	81DOG 01
44.3			FAA	79YAS 01	47	6		EXRF	79KUE 01
44.5	1.7		POL	74MAI 01	47.1	4.7		XRF	74REU 01
44.5	6.2		XRF	77SMI 04	47.3	5.6		FAA	82WEI 01
44.6	1.7		POL	72MAI 01	48	5		AA	82RIT 01
44.6	1.7		POL	77MAI 01	48	5		AA	78RIT 01
44.67	1.53		ASV	77KON 01	48.6	3.8		EXRF	75REU 01
44.7	0.8	6	FAA	84FUD 01	49			DCPES	78NAK 01
44.9			ICPES	78CAP 01	49	2		PAA	80SEG 01
44.9	1		ASV	82SAT 02	49	5		EXRF	77NIE 01
45		6	ICPMS	83DOU 01	49.3		16	AA	79ABO 01
45			POL	74LUT 01	49.3	1.5		PAA	80YAM 01

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Pb (ug/g) cont.</u>					<u>Rb (ug/g) cont.</u>				
49.7	1.4	6	FAA	84FUD 01	10			ITNA	80CRE 01
50			AE+AF	79ULL 01	10	0.9		ITNA	79AHM 01
50			FAA	74BRA 03	10	1		14NAA	81WIL 02
50			AA	76FUK 01	10	1		EXRF	79KUE 01
50	5		EXRF	77FLO 01	10	1.5		CPXRF	80KIR 01
50	11		AA	79MCQ 01	10.3		1	IENA	79KUC 01
51	3		EXRF	80DYC 01	10.3	0.6		ITNA	74RAN 02
52.6			FAA	78CAP 01	10.3	0.7		ITNA	75RIC 01
54	10		CPXRF	77CAM 01	10.5			ITNA	79KUC 01
54.5	7.2		ICPES	82AZI 01	10.5			ITNA	78CAP 01
56	1	6	ICPES	85ABD 01	10.6		1	IENA	79KUC 01
57	12		14NAA	81WIL 01	10.8	0.4		ITNA	79SAT 01
57	17		CPAA	77ZIK 01	10.8	2		SSMS	84VOS 01
58		6	ICPES	85ABD 01	10.95	0.08		ITNA	81KOS 01
67.5		6	DCPES	84SNE 01	11			RTNA	72MOR 03
76.1			AF	85NAR 02	11	0.8		EXRF	73GIA 01
85			OES	75BOL 02	11	1		ITNA	77ZIK 01
115			EXRF	81PAR 01	11	1		EXRF	80DYC 01
<u>Pd (ng/g)</u>					11	1		ITNA	78LAU 02
<	1	L	RTNA	81BYR 01	11	2		RTNA	77MEL 01
<u>Pr (ng/g)</u>					11	2		CPXRF	77CAM 01
60			SSMS	78URE 01	11	16	R	AA	75MAN 01
65	3		RTNA	84ODD 01	11.2	0.3		IENA	81KOS 01
103	15		RTNA	86TSU 01	11.2	0.4		EXRF	73SPA 01
110			RTNA	80SLO 01	11.2	0.9		ITNA	83AHM 01
230			RTNA	77LAU 02	11.2	1.5		ITNA	81HAB 01
230		D	RTNA	82LAU 01	11.28	0.42		NAA	76GUZ 01
270		11	SSMS	85VOS 01	11.3	2.9	5	ITNA	80TOU 01
<u>Pt (ng/g)</u>					11.3	5.2		EXRF	75REU 01
<	1		RTNA	84TJI 01	11.4			EXRF	81BIS 01
0.2			RTNA	82ZEI 01	11.5			XRF	78CAM 02
89.2	15.4		RTNA	77NAD 01	11.5	0.6		EXRF	79GIA 01
1200	300		RTNA	74CAR 03	11.5	0.9		FAA	83GRO 02
<u>Rb (ug/g)</u>					11.5	1		EXRF	77NIE 01
5	2		EXRF	77FLO 01	11.6	1		ITNA	85MAD 01
8.5	0.6		EXRF	85COE 02	11.6	3.4		SSMS	84VOS 01
9.8		11	SSMS	85VOS 01	11.7	0.1		ITNA	78GIL 01
9.8	1.3		XRF	77SMI 04	11.8			ITNA	80SAT 01
9.9	2.6		SSMS	84VOS 01	11.8	1.2	35	ITNA	81GLA 03
10			CPXRF	84KAU 01	11.9	0.8		NAA	78GAN 01
10		11	SSMS	85VOS 01	12			NAA	74BEL 01
10			NAA	77LAU 01	12	0.04		ITNA	78FUR 01
					12	0.7		ITNA	82COR 01
					12	1.1	6	ITNA	74BEC 01
					12	1.5		ITNA	77HAM 01
					12	2		ITNA	76KUC 01
					12.1	1	9	ITNA	78LAU 02
					12.5			ITNA	85MIS 01
					12.5	0.6		PAA	78HIS 01
					12.5	1		PAA	76KAT 04

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Rb (ug/g) cont.</u>					<u>S (ug/g) cont.</u>				
12.6	2.1		XRF	78STA 02	2300	200		TCGS	77JUR 01
12.8	0.6		14NAA	81WIL 01	2400			TURB	79BOG 01
12.8	0.7		CPXRF	85CLA 01	2400			FE	79BOG 01
13	0.9		VV	81NOW 01	2600	400		CPAA	84ROU 01
13	1		PAA	76KAT 02	2600	400		CPAA	85FRI 01
13	2		ITNA	81KUL 01	2700	400		XRF	81NAD 01
13	3.5		CPXRF	81ROB 02	7020	2620		EXRF	77NIE 01
13.1	2.5		SSMS	84VOS 01	<u>Sb (ug/g)</u>				
14	1		ITNA	84TU 01	1.1	0.2		ITNA	77ZIK 01
14	2		ITNA	85WAH 01	2.2	0.2		HAA	74LOO 01
14.8			CPXRF	75CAM 01	2.3		11	SSMS	85VOS 01
15.61	3.01		ITNA	79REN 03	2.3	0.26		RTNA	83SIR 01
19.9			SSMS	81VER 02	2.3	0.3	H	ICPES	79ROB 01
28			EXRF	81PAR 01	2.5			ITNA	78CAP 01
30			CPAA	78MCG 01	2.5	3.6	R	ITNA	79IMA 01
30			CPXRF	76ZEI 01	2.5	3.6	RD	ITNA	79IMA 03
<u>S (ug/g)</u>					2.55		11	FAA	79HOE 02
1200			CB	72JON 03	2.55		11	FAA	79HOE 02
1400	200	17	VV	72JON 03	2.57	0.19		ITNA	79REN 03
1400	600		CPXRF	79REN 02	2.58	0.47		ITNA	85MAD 01
1660	220		TCGS	79AND 01	2.62		6	NAA	78GAN 01
1690	5		TITR	80SMI 01	2.7			ITNA	80CRE 01
1700	200		TCGS	79FAI 01	2.7		1	IENA	79KUC 01
1760	790	7	NM	83LI 01	2.7			NAA	77LAU 01
1830			CPXRF	84KAU 01	2.7	0.1		ITNA	78LAU 02
1850	30		XRF	83GUN 01	2.7	0.2	D	RTNA	74GOE 01
1860	90		ICPES	84MOR 01	2.7	0.2		RTNA	73GOE 01
1860	180		COLOR	82BAR 01	2.7	0.2		ITNA	85WAH 01
1890	100		ICPES	84PRI 01	2.7	0.3		ITNA	74RAN 02
1900	34		CB	84HER 01	2.7	0.3	6	ITNA	74BEC 01
1920	20		CB	84LEC 02	2.7	0.4		14NAA	81WIL 02
1920	90		CB	86BOW 01	2.7	0.4	6	ITNA	74BEC 01
1943	23		CB	86GAU 01	2.72	0.01		ITNA	79AHM 01
1950	200		XRF	82BAR 01	2.72	0.01		ITNA	83AHM 01
1960		D	CB	85JAC 01	2.72	0.2		ITNA	82QUR 01
1960	40	6	CB	84JAC 01	2.77	0.02	H	ICPES	81PAH 01
2000	300		IC	83HER 01	2.8			HAA	80HON 01
2020	180		CB	84GLA 11	2.8			ITNA	79KUC 01
2028	21		ICPES	85LIE 02	2.8		1	IENA	79KUC 01
2040		D	CB	85JAC 01	2.8		11	HAA	82KUE 03
2040	60	6	CB	84JAC 01	2.8			ITNA	85MIS 01
2120			XRF	78CAM 02	2.8	0.1	7	RTNA	77GIL 03
2120	50		EXRF	77NIE 01	2.8	0.1		RTNA	78GAL 01
2140	60		WXRF	86BOW 01	2.8	0.1	H	ICPES	82HAH 01
2150	200		CB	77LAN 01	2.8	0.1	7	RTNA	80GAL 02
2150	380		EXRF	75REU 01	2.8	0.2		ITNA	81KOS 01
2200	103		CPXRF	80KIR 01	2.8	0.2		ICPES	83OLI 01
2200	1100	7	NM	83LI 01	2.85	0.06		RTNA	80SLO 01

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Sb (ug/g) cont.</u>					<u>Sc (ng/g)</u>				
2.86	0.08		RTNA	78GIL 01	40		6	NAA	78GAN 01
2.88	0.05		ITNA	80GAL 02	40	3	6	ITNA	74BEC 01
2.88	0.05	7	RTNA	77GIL 03	40	10	6	NAA	78GAN 01
2.9		11	KLP	82CPO 03	41	4		VV	81NON 01
2.9	0.09		RTNA	79HOE 01	44	3		ITNA	74RAN 02
2.9	0.1		ITNA	81KOS 01	50	10		RTNA	83SIR 01
2.9	0.2		ITNA	78VAL 01	52	3		ITNA	79CHA 04
2.9	0.3		ITNA	84TU 01	54	4		RTNA	80SLO 01
2.9	0.5		RTNA	79REN 01	57	6		ITNA	81KOS 01
2.92	0.08	7	RTNA	80GAL 02	60	1		ITNA	78LAU 02
2.92	0.08	7	RTNA	77GIL 03	62			NAA	74BEL 01
2.95	0.25		AA	83RAP 01	62	2		ITNA	79KOB 03
2.99	0.05		NAA	76FIO 01	62	3		ITNA	84TU 01
2.99	0.45		RTNA	79ROS 02	62	4.5		ITNA	85MAD 01
3			RTNA	79BYR 01	63	8		ITNA	76KUC 01
3			RTNA	72MOR 03	65			NAA	77LAU 01
3		11	NAA	82KUE 03	65	3		ITNA	75RIC 01
3	0.1		HAA	85YAM 01	66			ITNA	85GAU 04
3	0.2		FAA	80HAY 01	66	3		ITNA	84GLA 11
3	0.2	7	RTNA	80GAL 02	66	6		ITNA	79SAT 01
3.02	0.26		NAA	79VIJ 01	67			ITNA	78CAP 01
3.1		11	NAA	82CRO 03	67	5		ITNA	81HAB 01
3.1	0.03		VV	81NON 01	70.1	4		ITNA	83AHM 01
3.1	0.1		ITNA	79SAT 01	73			ITNA	80CRE 01
3.1	0.7		ITNA	77HAM 01	75	5	5	ITNA	80TOU 01
3.14	0.13		RTNA	72BYR 01	75	7		ITNA	85WAH 01
3.15	0.26		PAA	74CHA 01	80			ITNA	79KUC 01
3.16	0.26		NAA	77JER 01	80	6		ITNA	79REN 03
3.2	0.2		GCMES	75TAL 01	81	2		ITNA	84GIB 01
3.25	0.3		PAA	76KAT 04	90			ITNA	85MIS 01
3.3		11	NAA	82KUE 03	90	20		ITNA	81KUL 01
3.3	0.14		ITNA	79KOB 03	110			SSMS	78URE 01
3.3	0.2	5	ITNA	80TOU 01	170	50		RTNA	77MEL 01
3.3	0.2		PAA	76KAT 02	200			RTNA	72MOR 03
3.3	0.3		ITNA	81KUL 01	220	10		PAA	74CHA 01
3.3	0.6		RTNA	77KUS 01					
3.31	0.15		ITNA	84NDI 01					
3.5			ICPES	85NAR 02	<u>Se (ng/g)</u>				
3.5			AF	85NAR 02	24	6.7		FAA	81MEY 01
3.5	0.2		PAA	78HIS 01	53			FLUOR	79TAM 01
3.5	0.3		FAA	78HAY 01	55	9		HAA	76FIO 01
3.78	0.02		ITNA	81HAB 01	56	20		RTNA	79ROS 02
3.8	0.2		RTNA	73TJI 01	57	6.3		ITNA	77HAM 01
3.8	0.6	6	NAA	78GAN 01	58	14		RTNA	73TJI 01
5.1	1.1		14NAA	81WIL 01	60	20	D	RTNA	74GOE 01
					60	20		RTNA	73GOE 01
					60	20		ICPES	83OLI 01
					64		7	ICPES	84MIA 01
					65	14	9	ITNA	80WAN 01
					68			FAA	82HEI 01

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Se (ng/g) cont.</u>					<u>Se (ng/g) cont.</u>				
70			FAA	78CAP 01	82	20		IENA	81KOS 01
70		11	HAA	85PIW 01	82	24		HAA	76IHN 02
70	4		ICPES	80HAA 01	83	4		DCPES	81CAR 02
70	10	H	ICPES	82HAH 01	83	4		GCMES	74TAL 02
70	20		HAA	82TAM 01	83	4		VV	81NON 01
70	200	R	RTNA	81GLA 03	83	12	9	ITNA	77VOB 01
72	8		FLUOR	83KOH 01	84	8		RTNA	78GIL 01
74			ITNA	81MEY 01	85	4		ITNA	79SAT 01
74			ITNA	81HAM 01	86	10		ITNA	78GIL 01
75	5	7	RTNA	80GAL 02	87		17	FLUOR	74AND 01
75	5	7	RTNA	77GIL 03	87	3	6	FLUOR	75OLS 01
75	20		AA	83RAP 01	87	3		FLUOR	74LEI 01
76	1.3		HAA	81HAN 01	87	7		HAA	75SIE 01
76	3	11	GC	81UCH 02	87	10	7	RTNA	77GIL 03
76	10		ITNA	79AHM 01	87	10	7	RTNA	80GAL 02
77		17	FLUOR	74AND 01	88	7		RTNA	73HEY 01
77	2	11	GC	81UCH 02	88	11		FLUOR	74IHN 02
77	5		FLUOR	76CHA 02	88	16		ASV	76AND 01
77	6		FAA	79VOB 01	89	3	6	FLUOR	75OLS 01
78			HAA	77IHN 01	89	17		ITNA	77VOB 01
78		7	ICPES	84MIA 01	90			HAA	80HON 01
78	4		ASV	84ADE 01	90		11	HAA	85PIW 01
78	4		RTNA	78COO 01	90	4		HAA	85YAM 01
78	4		ITNA	77GUI 02	90	10	7	RTNA	80GAL 02
78	5		GC	77POO 01	90	10	7	RTNA	77GIL 03
78	7	34	HAA	78FLA 01	90	10		RTNA	77BAN 03
78	7.2		HAA	81MEY 01	90	10		RTNA	78GAL 01
78	10		ITNA	83AHM 01	90	10		ITNA	82QUR 01
78	10		ITNA	85WAH 01	90	20		ITNA	79PAV 02
78	11		RTNA	82POL 01	90	30		ITNA	78LAU 02
79	12		RTNA	77ROO 02	100			ITNA	80CRE 01
79	12		RTNA	72ROO 03	100			ITNA	79VOB 01
79.8	8		NAA	76GUZ 01	100	20	7	RTNA	80GAL 02
80		17	FLUOR	74AND 01	100	20	9	ITNA	78LAU 02
80			NAA	78GAN 01	100	20	6	ITNA	74BEC 01
80			RTNA	72MOR 03	100	40		NAA	74LEI 01
80		7	ICPES	84MIA 01	110	20		RTNA	80SLO 01
80	1		FAA	80NEV 01	110	30		AA	79PAV 02
80	4		FLUOR	80KOH 01	118	79		HAA	77IHN 03
80	10		RTNA	80KHA 01	130	40		RTNA	77MEL 01
80	10	9	ITNA	79VOB 01	140	20		ITNA	74RAN 02
80	10	9	ITNA	79PAV 02	140	90		RTNA	83SIR 01
80	10		RTNA	75ABU 01	160			ICPES	84MAR 01
80	10		RTNA	74ORV 01	200			ITNA	78CAP 01
80	10		ITNA	84GIB 01	1100	170		HAA	74CHU 01
80	20		HAA	80AGE 02					
80	20		SSMS	77ROO 02					
80	30		ITNA	81KOS 01					
80.4	4.6		RTNA	78GOE 03					
81	9		HAA	83KOL 01					

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Si (ug/g)</u>					<u>Sn (ng/g)</u>				
475.8	12.29		NAA	76GUZ 01	180	10	H	ICPES	82HAH 01
475.8	12.3		ITNA	75PIE 01	230		11	SSMS	85VOS 01
480	14		CPXRF	80KIR 01	284	4	5	RTNA	74BYR 01
500	200		14NAA	80FAA 01	290	25		RTNA	77BYR 01
600			VV	81NOW 01	304	15	5	RTNA	74BYR 01
750			NAA	78GAN 01	340	90		ICPES	80HAA 01
1000	160		14NAA	77SEG 01	375	25		COLOR	82OMA 01
2080			CPXRF	84KAU 01	1750			AF	85NAR 02
2340	60		IENA	79JON 01	4100			RTNA	72BOW 01
2400		11	SSMS	85VOS 01					
<u>Sm (ng/g)</u>					<u>Sr (ug/g)</u>				
16	3		IENA	81KOS 01	14.5	2.5		FAA	77FUJ 01
19	4		ITNA	81KOS 01	18.1			SSMS	81VER 02
88	8	5	ITNA	80TOU 01	23			OES	75JON 03
90			SSMS	78JRE 01	26	2		EXRF	85COE 02
90	140	R	ITNA	79IMA 01	28	0.6		PAA	78HIS 01
92	2		RTNA	86TSU 01	28	28.3	R	AA	75MAN 01
100			ITNA	79KUC 01	29.7			CPXRF	84KAU 01
100			RTNA	77LAU 02	30	6		SSMS	84VOS 01
100		1	IENA	79KUC 01	30.4		6	ICPES	83BRA 02
100		D	RTNA	82LAU 01	31		11	SSMS	85VOS 01
100			NAA	77LAU 01	31	3.3		CPXRF	80KIR 01
100	30		ITNA	77NAD 02	31.3	4.1		XRF	77SMI 04
105	4		RTNA	80SLO 01	31.7	4.8		14NAA	77VAN 01
110			ITNA	80CRE 01	33		11	SSMS	85VOS 01
110	10		ITNA	78LAU 02	33	4		SSMS	84VOS 01
110	10		RTNA	83SIR 01	33	6		SSMS	84VOS 01
110	30		TCGS	79FAI 01	33.1			EXRF	81BIS 01
113	7		RTNA	83TJI 01	33.6		6	ICPES	83BRA 02
114	1		RTNA	84ODD 01	34	1		FAA	82SUZ 03
130	40		ITNA	77HAM 01	34.3	0.5		EXRF	73SPA 01
140		1	IENA	79KUC 01	35			OES	75JON 04
140			RTNA	72MOR 03	35			NAA	77LAU 01
140	40		ITNA	74RAH 02	35	2		EXRF	80DYC 01
150	20		VV	81NOW 01	35	3	9	ITNA	78LAU 02
150	33		ITNA	85MAD 01	35	3		ICPES	79ABE 01
170	30		TCGS	79AND 01	35	5		SSMS	84VOS 01
320	120		ITNA	79REN 03	35.2			ICPES	78DAH 01
					35.2	4.9		ITNA	84TU 01
					36		6	ICPMS	83DOU 01
					36			CPXRF	76ZEI 01
					36			CPAA	78MCG 01
					36	1		ICPES	85LIE 02
					36	6		ITNA	78LAU 02
					36.2	2		PAA	74CHA 01
					36.3	1.3		EXRF	79GIA 01
					36.3	1.8		CPXRF	85CLA 01
					36.5	0.3		ICPES	79HER 01
					36.5	1		PAA	76KAT 04

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Sr (ug/g) cont.</u>					<u>Te (ng/g)</u>				
36.5	2		EXRF	77FLO 01	10	3		HAA	85YAM 01
36.5	4		EXRF	75REU 01	11	3	35	RTNA	75GLA 01
36.6	1.2		EXRF	73GIA 01	<u>Th (ng/g)</u>				
36.7	6		XRF	78STA 02	6.6	0.3		IENA	81KOS 01
37	1		ITNA	79SAT 01	6.8	0.4		ITNA	81KOS 01
37	1		PAA	76KAT 02	40	10		RTNA	83SIR 01
37	1		ICPES	79MCQ 02	44			ITNA	79KUC 01
37	2		ICPES	79MCQ 01	44		1	IENA	79KUC 01
37.2	0.2		IENA	81KOS 01	50	10		RTNA	80SLO 01
37.4	8.3		CPXRF	81ROB 02	52	4		ITNA	78LAU 02
37.8		6	ICPES	83BRA 02	59	13		ITNA	81KUL 01
37.8	0.1		IENA	85GAU 04	59	20		ITNA	74RAN 02
38	5		NAA	78GAN 01	60			ITNA	80CRE 01
38.7	1.5		ITNA	81KOS 01	60			NAA	77LAU 01
39	2		14NAA	81WIL 02	63	23		ITNA	85MAD 01
39	3		ICPES	84SOB 01	69		1	IENA	79KUC 01
40			RTNA	72MOR 03	69.8	8.1		RTNA	85JAI 01
41	3		RTNA	77KUS 01	85			ITNA	85HIS 01
42.2	4.2		XRF	74REU 01	90	50		VV	81NON 01
44.2	2.85		NAA	76GUZ 01	<u>Ti (ug/g)</u>				
45			OES	75JON 01	2.4	0.4		CPAA	77ZIK 01
45			EXRF	81OHT 01	6.6	0.5		ICPES	79ABE 01
45	2		ITNA	74RAN 02	7.6			ICPES	78CAP 01
45	15		CPAA	77ZIK 01	10.5	0.8		ICPES	85LIE 02
53	4		14NAA	81WIL 01	14.2			SSMS	81VER 02
118			EXRF	81PAR 01	17.2	0.3		COLOR	82KIR 02
160		6	ICPMS	83DOU 01	17.7	2		SSMS	84VOS 01
<u>Ta (ng/g)</u>					18	8.5		EXRF	79GIA 01
5			NAA	77LAU 01	19.1		11	SSMS	85VOS 01
7	2		ITNA	78LAU 02	19.3		11	SSMS	85VOS 01
10			ITNA	80CRE 01	21.9	3		CPXRF	85CLA 01
10	3		ITNA	74RAN 02	22	2		SSMS	84VOS 01
<u>Tb (ng/g)</u>					22	3		SSMS	84VOS 01
1.23	0.12		ITNA	77NAD 02	23	2.3		SSMS	84VOS 01
9	1		RTNA	80SLO 01	24	5		FAA	86GAU 01
9	2		RTNA	86TSU 01	26			SSMS	78URE 01
10	7		RTNA	83SIR 01	26	3		14NAA	81WIL 01
12	2		ITNA	78LAU 02	28.6			CPXRF	84KAU 01
13		D	RTNA	82LAU 01	30	4		14NAA	81WIL 02
13			RTNA	77LAU 02	40			ITNA	78LAU 02
14			ITNA	80CRE 01	60			NAA	77LAU 01
15			NAA	77LAU 01	96	12		PAA	78HIS 01
15	2		RTNA	83TJI 01	191	33		ITNA	81HAB 01
18	1		ITNA	74RAN 02					
72	6		RTNA	84ODD 01					
80			SSMS	78URE 01					

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Tl (ng/g)</u>					<u>V (ng/g)</u>				
32		11	ASV	84LIE 01	140	30	6	ITNA	74HOF 01
34		11	ASV	84LIE 01	248	10	11	RTNA	82HEY 02
36		11	FAA	84LIE 01	300		35	ITNA	81GLA 03
40	20		FAA	77BRU 01	340	20	11	RTNA	72LEV 01
74			FAA	82HEI 01	361	90		UU	75WEL 02
200	40		PAA	80SEG 01	370	11		FAA	77MYR 01
300	100		PAA	78HIS 01	377	10		RTNA	80HEY 01
<u>Tm (ng/g)</u>					390	980	RD	ITNA	79IMA 03
					390	980	R	ITNA	79IMA 01
					400	100		ITNA	772IK 01
<	10		RTNA	77LAU 02	401	16		RTNA	79COR 01
<	10	D	RTNA	82LAU 01	401	16		RTNA	81COR 02
3.72	0.23		ITNA	77NAD 02	408	16		RTNA	80HEY 01
7	5.5		RTNA	84OOD 01	408	16	11	RTNA	82HEY 02
10			SSMS	78URE 01	409	41		RTNA	72DAM 01
<u>U (ng/g)</u>					410	15		RTNA	80HEY 01
					410	15	11	RTNA	82HEY 02
18	3		IENA	79FAA 01	435	20		RTNA	80HEY 01
25	4	35	RTNA	75GLA 01	440	40		RTNA	79BLO 01
25	5		PAA	80SEG 01	440	200		ICPES	85LIE 02
25.2	1		RTNA	78DER 01	471	14	11	RTNA	78BYR 01
26	3		RTNA	72BEC 03	480	28		COLOR	82KIR 01
27	8		ITNA	81KUL 01	500	150		RTNA	77GUI 03
27	10		ITNA	85WAH 01	530	50	11	ICPES	82JON 01
28	2		NT	72BEC 03	535			NAA	80KOS 02
28	3	5	RTNA	80AUG 01	535	30	11	RTNA	78BYR 01
28	3		IENA	81KOS 01	540	20	11	ICPES	82JON 01
29	3	5	RTNA	80AUG 01	570	110		ITNA	81HAB 01
30		35	DNA	81GLA 04	570	140	6	ITNA	74HOF 01
30	1		IDMS	72BEC 03	580			ITNA	76BAT 01
30	4	13	PAA	81SEG 01	580	70		ITNA	75RIC 01
30	6	13	PAA	81SEG 01	580	130		ITNA	77HAM 01
30.6	0.6	35	DNA	80GLA 04	598	32		ITNA	80HEY 01
31	7		DNA	84GLA 11	600	20		RTNA	79BLO 01
32	5		ITNA	81KOS 01	600	200		ITNA	78LAU 02
32	9		ITNA	74WEA 01	610	23		ITNA	73PIE 01
33	2		DNA	84GLA 02	622	23	11	RTNA	72LEV 01
33.6	0.6		DNA	85GAU 04	640	310		UU	75GUI 01
34.3	0.6		DNA	86GAU 01	643	129		RTNA	76GUI 01
56	9	35	DNA	81GLA 03	660		11	SSMS	85VOS 01
					680		11	SSMS	85VOS 01
					700	100		ITNA	79KOB 03
					750	110		VV	81NON 01
					800			ITNA	78CAP 01
					900	20		ITNA	76GAL 01
					2200	100		ICPES	79ABE 01

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>W (ng/g)</u>					<u>Zn (ug/g) cont.</u>				
<	2000	L	RTNA	72MOR 03	22			AA	83ELA 01
16	4		RTNA	80SLO 01	22	1		EXRF	80DYC 01
20	7		RTNA	77KUS 01	22	3.1		CPXRF	80KIR 01
50	10		RTNA	83SIR 01	22.5	0.8		AA	76GAL 01
<u>Y (ng/g)</u>					23			AA	73LOO 03
<	1000	L	EXRF	79GIA 01	23			AA	84SAT 02
<	1100	L	14NAA	81WIL 01	23			AE+AF	79ULL 01
<	1100	L	14NAA	81WIL 02	23			OES	75JON 02
480			SSMS	78URE 01	23			EXRF	81BIS 01
<u>Yb (ng/g)</u>					23			ITNA	78CAP 01
11			RTNA	80SLO 01	23		11	SSMS	85VOS 01
20			SSMS	78URE 01	23	1		RTNA	76MEL 03
20	2		RTNA	86TSU 01	23	1		RTNA	77MEL 01
20	20		RTNA	83SIR 01	23	1.5		EXRF	85COE 02
21	1		ITNA	77NAD 02	23	2	7	RTNA	80GAL 02
21	2		RTNA	83TJI 01	23	2.1		XRF	78LIN 01
25			RTNA	77LAU 02	23	5		SSMS	84VOS 01
25		D	RTNA	82LAU 01	23.1			ICPES	78CAP 01
27	5		RTNA	84ODD 01	23.1	0.8		RTNA	83DAN 01
29	3		ITNA	81KOS 01	23.2	2.2		AA	77BRU 01
31	1		ITNA	81KOS 01	23.3	2.7		RTNA	74RAV 01
34	3		ITNA	85WAH 01	23.4	1.4	11	ASV	84LOC 01
40			NAA	77LAU 01	23.5	0.9	11	ICPES	82JON 01
<u>Zn (ug/g)</u>					23.5	1.8		AA	73THO 01
12			EXRF	82KEE 01	23.7	0.8		EXRF	73GIA 01
13			OES	75BOL 02	23.75			ITNA	82AKA 01
15	3		CPXRF	77CAM 01	23.9	1.5		ASV	84LOC 01
17			AA	76KRI 03	23.9	3.2		PAA	80YAM 01
17.1	2		EXRF	77FLO 01	24			FAA	73SEG 01
18			OES	75JON 09	24			AA	81ARA 01
18	1		ICPES	85LIE 02	24			FAA	83ATS 01
19			FAA	83ATS 01	24		6	ICPES	83CHA 01
19	4		ICPES	79HER 01	24		1	AA	77FRY 01
19.8		6	ICPES	83BRA 02	24	0.4		VV	81NON 01
20	3		ITNA	81KUL 01	24	1	7	RTNA	84FAR 02
20	4		ICPES	82AZI 02	24	1		RTNA	74ORV 01
20	6		CPAA	77ZIK 01	24	1	7	RTNA	84FAR 02
20.3		11	SSMS	85VOS 01	24	1	11	AA	78GAI 01
21	1		ICPES	79ABE 01	24	1		AA	84GLA 02
21	2		ITNA	75RIC 01	24	1.5		FAA	84ROS 01
21	7		SSMS	84VOS 01	24	2	11	AA	78GAI 01
21.5	1.8		ICPES	82AZI 01	24	2	7	RTNA	84FAR 02
21.7	2.8		ITNA	81HAB 01	24	2		ITNA	85WAH 01
22			ITNA	79KUC 01	24	3		AA	77YAN 01
					24	28	R	AA	75MAN 01
					24.2	1.5		NAA	77JER 01
					24.2	1.5		PAA	74CHA 01
					24.2	2		AA	83RAP 01
					24.3	0.3	11	ICPES	82JON 01
					24.4	0.9		CPXRF	85CLA 01

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Zn (ug/g) cont.</u>					<u>Zn (ug/g) cont.</u>				
24.5			CPXRF	84KAU 01	26	1		ICPES	79MCQ 02
24.5			XRF	78CAM 02	26	1		ICPES	79MCQ 01
24.5	0.6		RTNA	80SLO 01	26	1.3	11	AA	75ISA 01
24.5	0.8		RTNA	83SIR 01	26	2	11	ICPES	82JON 01
24.5	3		EXRF	77NIE 01	26	2.1		AA	78LIN 01
24.6			RTNA	79BYR 01	26	3		ICPES	80SCH 05
24.6	0.9		SSMS	72MAG 01	26	3	D	ICPES	80SCH 08
24.6	2.2	11	ICPES	81MUN 01	26	3		RTNA	74CAR 03
24.7			AA	83FAG 01	26	3		EXRF	79KUE 01
24.7	1.5		ITNA	84TU 01	26	3.4		ITNA	77HAM 01
24.7	2.2	6	EXRF	79MAT 01	26	4		ITNA	76KUC 01
24.8	1.1		ITNA	78GIL 01	26	4		ICPES	84ABD 01
24.8	1.9		ITNA	79SAT 01	26	5		AA	75ABU 01
25			ITNA	80CRE 01	26	14		AA	82HAR 01
25			ITNA	80SAT 01	26.1	2.2		ITNA	82COR 01
25			OES	75JON 03	26.3	5		XRF	78STA 02
25			RTNA	72MOR 03	26.4	1.8		ICPES	83SCH 04
25		6	ICPES	83CHA 01	26.7	4.6	6	ITNA	74BEC 01
25			ICPES	81WEI 01	26.8	1.2		ITNA	81KOS 01
25	1		ICPES	84SOB 01	26.9	1.1	11	ASV	84LOC 01
25	1	11	ICPES	82JON 01	26.9	1.2		RTNA	73TJI 01
25	1	6	ICPES	85ABD 01	27		6	ICPES	85ABD 01
25	1	11	ICPES	82JON 01	27			OES	75JON 06
25	1		AA	78RIT 01	27			AA	79HIL 01
25	1.6		EXRF	73SPA 01	27		1	AA	77FRY 01
25	2	9	ITNA	78LAU 02	27			ICPES	78DAH 01
25	3		FAA	82JEN 02	27			NAA	77LAU 01
25	3		ITNA	78LAU 02	27	1	11	ICPES	82JON 01
25	4		SSMS	84VOS 01	27	2		RTNA	77KUS 01
25.07	0.76		NAA	76GUZ 01	27	2		RTNA	73GOE 01
25.1	0.7		AF	75EPS 01	27	2	D	RTNA	74GOE 01
25.1	0.8		AA	75EPS 01	27	2		ITNA	83AHM 01
25.3			SSMS	81VER 02	27	2		FAA	74TAL 01
25.3	0.5		AA	80AGE 01	27	2	7	AA	73TAL 01
25.3	2.1		EXRF	79GIA 01	27	3		PAA	76KAT 02
25.3	2.5	6	EXRF	79MAT 01	27	4		PAA	76KAT 04
25.5		11	AA	79HOE 02	27	5		SSMS	84VOS 01
25.5		6	ICPES	83BRA 02	27	7		ITNA	77ZIK 01
25.5	1.1	6	ITNA	74BEC 01	27.2	2.4		ITNA	74RAN 02
25.6	3.4		EXRF	75REU 01	27.3			ICPES	85NAR 02
25.6	7.64		AA	79MON 01	27.3	2.1		ITNA	82QUR 01
25.9			FAA	78CAP 01	27.3	2.1		ITNA	79AHM 01
26			OES	75JON 10	27.4	2.7		XRF	74REU 01
26			OES	75JON 11	27.5		11	AA	79HOE 02
26			OES	75JON 05	27.6	1.3		CPXRF	81ROB 02
26			NAA	74BEL 01	28			OES	75ISA 01
26		6	AF	84NAR 02	28			ITNA	85MIS 01
26		6	AF	84NAR 02	28	1	D	DCPES	81REE 01
26	1	11	ICPES	82JON 01	28	1		DCPES	79REE 01
26	1	11	ICPES	82JON 01	28	3		FAE	74TAL 01

TABLE 1571-2: INDIVIDUAL DATA FOR NBS SRM 1571 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Zn (ug/g) cont.</u>					<u>Zr (ug/g)</u>				
28	3	7	AE+AF	73TAL 01	<	3	L	EXRF	79GIA 01
28	5		FAA	77LOR 01	<	5	L	14NAA	81WIL 01
28.1			CPXRF	75CAM 01	0.4		11	SSMS	85VOS 01
28.3	0.8		ITNA	79KOB 03	1.3	0.3		PAA	78HIS 01
28.3	2.6	6	POL	72SIN 01	1.6	0.2	9	ITNA	78LAU 02
28.5		6	ICPES	83BRA 02	1.7	0.44		PAA	84SAT 01
28.5	0.8		ICPES	81KNA 01	2.1			NAA	77LAU 01
28.6	2.5	11	ICPES	81MUN 01	3	1		14NAA	81WIL 02
28.7			AF	85NAR 02	3.8			CPAA	77ZIK 01
29	0.87	11	AA	75ISA 01	210	20		PAA	74CHA 01
29	1		FAA	79KRA 01					
29	2		ITNA	74GUI 01					
29	5		NAA	78GAN 01					
29	32	RD	ITNA	79IMA 03					
29	32	R	ITNA	79IMA 01					
29.1	3.7		ICPES	85LYO 01					
29.3	2.5		PAA	76WIL 01					
29.5		6	AA	72SIN 01					
29.6		16	AA	79ABO 01					
29.6		16	AA	79ABO 01					
29.63	1.8		ITNA	79REN 03					
29.8		6	POL	72SIN 01					
30			EXRF	81OHT 01					
30			ICPES	81GOO 01					
30	2	5	ITNA	80TOU 01					
30	2		AA	79MCQ 01					
30	3		PAA	80SEG 01					
30	4		ITNA	78FUR 01					
30.5	1.2		RTNA	76GAL 01					
31			OES	75JON 04					
32			OES	75JON 07					
34	3		PAA	78HIS 01					
35.6	11.4		XRF	77SMI 04					
36.4	7		ITNA	85MAD 01					
37			ICPES	84NAD 01					
38	6		FAA	77FUJ 01					
41			OES	75JON 08					
45			XRF	80SUZ 02					
56			CPXRF	76ZEI 01					
56			CPAA	78MCG 01					
77			EXRF	81PAR 01					
81			OES	75JON 01					

TABLE 1572-1: COMPILED DATA FOR NBS SRM 1572 CITRUS LEAVES (revised 3/1/86)

ELE	UNITS	NBS		CONSENSUS		MEDIAN	RANGE	AA		NAA		OTHER METHODS	
		Mean \pm SD	(n)	Mean \pm SD	(n)			Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n) Method
Al	ug/g	92 \pm 15	(2)	76.5	(2)	---	75 - 78	---	---	75	(1)	78	(1) ICPEs
As	ug/g	3.1 \pm 0.3	(4)	3.0 \pm 0.3	(4)	2.77	2.7 - 3.38	---	---	3.0 \pm 0.3	(4)	---	---
Au	pg/g	---	(1)	110	(1)	---	---	---	---	110	(1)	---	---
B	ug/g	---	(2)	66.6	(2)	---	64.3 - 69	---	---	---	---	69	(1) ICPEs
B	ug/g	---	(2)	---	(2)	---	---	---	---	---	---	64.3	(1) TCGS
Ba	ug/g	21 \pm 3	(2)	23.5	(2)	---	23 - 24	23	(1)	---	---	24	(1) ICPEs
Be	ng/g	---	(3)	6.9 \pm 0.8	(3)	7.2	6 - 7.6	6	(1)	---	---	---	---
Be	ng/g	---	(3)	---	(3)	---	---	---	---	---	---	7.4	(2) FAAC
Br	ug/g	8.2	(1)	8.36	(1)	---	---	---	---	8.36	(1)	---	---
Ca	%	3.15 \pm 0.10	(5)	3.13 \pm 0.04	(5)	3.14	3.07 - 3.19	3.10	(2)	---	---	3.15 \pm 0.04	(3) ICPEs
Cd	ng/g	30 \pm 10	(2)	46	(2)	---	37 - 55	55	(1)	37	(1)	---	---
Ce	ng/g	280	(2)	453	(2)	---	392 - 514	---	---	453	(2)	---	---
Cl	ug/g	414	(2)	404	(2)	---	391 - 417	---	---	417	(1)	391	(1) TCGS
Co	ng/g	20	(1)	16	(1)	---	---	---	---	16	(1)	---	---
Cr	ug/g	0.8 \pm 0.2	(1)	1	(1)	---	---	1	(1)	---	---	---	---
Cs	ng/g	98	(3)	93 \pm 16	(3)	85	83 - 111	---	---	93 \pm 16	(3)	---	---
Cu	ug/g	16.5 \pm 1.0	(6)	16 \pm 1.0	(6)	15.9	14.6 - 17	16.7 \pm 0.6	(3)	14.6	(1)	15	(1) ICPEs
Cu	ug/g	---	(6)	---	(6)	---	---	---	---	---	---	15.9	(1) HPLC
Dy	ng/g	---	(1)	43	(1)	---	---	---	---	43	(1)	---	---
Er	ng/g	---	(1)	22	(1)	---	---	---	---	22	(1)	---	---
Eu	ng/g	10	(2)	13.5	(2)	---	12 - 15	---	---	13.5	(2)	---	---
F	ug/g	---	(1)	4	(1)	---	---	---	---	---	---	4	(1) COLOR
Fe	ug/g	90 \pm 10	(4)	101 \pm 6	(4)	96	95 - 109	96	(2)	---	---	105.9	(2) ICPEs
Gd	ng/g	---	(1)	39	(1)	---	---	---	---	39	(1)	---	---
H	%	---	(1)	5.96	(1)	---	---	---	---	---	---	5.96	(1) TCGS
Hg	ng/g	80 \pm 20	(3)	81 \pm 3	(3)	83	77 - 83	83	(1)	80	(2)	---	---
Ho	ng/g	---	(1)	8	(1)	---	---	---	---	8	(1)	---	---
I	ug/g	1.84 \pm 0.03	(2)	1.46	(2)	---	1.29 - 1.62	---	---	1.46	(2)	---	---
K	%	1.82 \pm 0.06	(5)	1.83 \pm 0.04	(5)	1.84	1.78 - 1.89	1.79	(2)	---	---	1.84	(2) ICPEs
K	%	---	(5)	---	(5)	---	---	---	---	---	---	1.89	(1) TCGS
La	ng/g	190	(2)	198	(2)	---	192 - 203	---	---	198	(2)	---	---
Li	ng/g	---	(3)	230 \pm 105	(3)	190	150 - 350	270	(2)	---	---	150	(1) AAC
Lu	ng/g	---	(2)	1.55	(2)	---	1.1 - 2	---	---	1.55	(2)	---	---
Mg	ug/g	5800 \pm 300	(5)	5600 \pm 70	(5)	5600	5500 - 5700	5650	(2)	---	---	5570 \pm 60	(3) ICPEs

TABLE 1572-1: COMPILED DATA FOR NBS SRM 1572 CITRUS LEAVES (cont.)

ELE	UNITS	NBS		CONSENSUS		MEDIAN	RANGE		AA		NAA		OTHER METHODS	
		Mean \pm	SD	Mean \pm	SD (n)				Mean \pm	SD (n)	Mean \pm	SD (n)	Mean \pm	SD (n) Method
Mn	ug/g	23 \pm 2	---	22.9 \pm 1.4	(7)	23	21 - 25	---	24	(2)	23.3	(1)	22.4 \pm 1.6	(3) ICPEs
Mn	ug/g	---	---	---	---	---	---	---	---	---	---	---	22	(1) TCGS
Mo	ng/g	170 \pm 90	---	152	(2)	---	150 - 153	---	---	---	152	(2)	---	---
N	%	2.86	---	3.62	(1)	---	---	---	---	---	---	---	3.62	(1) TCGS
Na	ug/g	160 \pm 20	---	163 \pm 1	(3)	163	162 - 164	---	---	---	163	(1)	163	(2) ICPEs
Nd	ng/g	---	---	317	(2)	---	202 - 432	---	---	---	317	(2)	---	---
Ni	ng/g	600 \pm 300	---	715	(2)	---	600 - 830	---	600	(1)	---	---	830	(1) HPLC
P	ug/g	1300 \pm 200	---	1310 \pm 20	(3)	1300	1300 - 1332	---	---	---	---	---	1310 \pm 20	(3) ICPEs
Pb	ug/g	13.3 \pm 2.4	---	13.4	(2)	---	13.2 - 13.6	---	13.6	(1)	---	---	13.2	(1) HPLC
Pt	pg/g	---	---	60	(1)	---	---	---	---	---	60	(1)	---	---
Rb	ug/g	4.84 \pm 0.06	---	---	---	---	---	---	---	---	---	---	---	---
S	ug/g	4070 \pm 90	---	4080 \pm 180	(7)	4066	3822 - 4400	---	---	---	---	---	3822	(1) ICPEs
S	ug/g	---	---	---	---	---	---	---	---	---	---	---	4070 \pm 90	(4) CB
S	ug/g	---	---	---	---	---	---	---	---	---	---	---	4400	(1) TCGS
S	ug/g	---	---	---	---	---	---	---	---	---	---	---	4066	(1) IDMS
S-32/34 ratio	---	---	---	22.6310	(1)	---	---	---	---	---	---	---	22.6310	(1) IDMS
S-33/34 ratio	---	---	---	0.1781	(1)	---	---	---	---	---	---	---	0.1781	(1) IDMS
Sb	ng/g	40	---	34	(1)	---	---	---	---	---	34	(1)	---	---
Sc	ng/g	10	---	10.4 \pm 0.5	(3)	10.2	10 - 11	---	---	---	10.4 \pm 0.5	(3)	---	---
Se	ng/g	25	---	---	---	---	---	---	---	---	---	---	---	---
Si	%	---	---	0.19	(1)	---	---	---	---	---	---	---	0.19	(1) TCGS
Sm	ng/g	52	---	50	(2)	---	49 - 52	---	---	---	50	(2)	---	---
Sn	ng/g	240	---	---	---	---	---	---	---	---	---	---	---	---
Sr	ug/g	100 \pm 2	---	98 \pm 3	(5)	99.3	93 - 102	---	100	(2)	93	(1)	99.3	(1) CPAA
Sr	ug/g	---	---	---	---	---	---	---	---	---	---	---	101	(1) IDNAA
Tb	ng/g	---	---	9	(2)	---	9 - 9	---	---	---	9	(2)	---	---
Te	ng/g	20	---	---	---	---	---	---	---	---	---	---	---	---
Ti	ug/g	---	---	22	(1)	---	---	---	22	(1)	---	---	---	---
Tl	ng/g	< 10	---	---	---	---	---	---	---	---	---	---	---	---
U	ng/g	< 150	---	40 \pm 2	(3)	41	37 - 41	---	---	---	40 \pm 2	(3)	---	---
V	ng/g	---	---	240	(2)	---	235 - 245	---	---	---	235	(1)	245	(1) IDMS
W	ng/g	---	---	8.1	(1)	---	---	---	---	---	8.1	(1)	---	---
Yb	ng/g	---	---	11.5	(2)	---	8 - 15	---	---	---	11.5	(2)	---	---
Zn	ug/g	29 \pm 2	---	29.9 \pm 1.4	(6)	29.7	28 - 31.8	---	30.5	(2)	---	---	29.6 \pm 2.0	(3) ICPEs
Zn	ug/g	---	---	---	---	---	---	---	---	---	---	---	29.7	(1) HPLC

TABLE 1572-2: INDIVIDUAL DATA FOR NBS SRM 1572 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Al (ug/g)</u>					<u>Ce (ng/g)</u>				
75	2		IENA	85GLA 02	392	53		RTNA	83TJ1 01
78	12		ICPES	85ISS 01	514	79		RTNA	86TSU 01
<u>As (ug/g)</u>					<u>Cl (ug/g)</u>				
2.7	0.3		RTNA	85GAU 04	391	6		TCGS	83AND 01
2.77	0.2		RTNA	86GAU 01	417			ITNA	86GAU 01
3.2	0.06		RTNA	84GLA 11	<u>Co (ng/g)</u>				
3.38	0.05		RTNA	84BYR 02	16	1		RTNA	84BYR 02
<u>Au (pg/g)</u>					<u>Cr (ug/g)</u>				
110	8		RTNA	82ZEI 01	1	0.5		FAA	85GAU 04
<u>B (ug/g)</u>					<u>Cs (ng/g)</u>				
64.3	0.6		TCGS	83AND 01	83			ITNA	86GAU 01
69	0.3		ICPES	84PRI 01	85	6		ITNA	84GLA 11
<u>Ba (ug/g)</u>					111	25		ITNA	85GAU 04
23	6		FAA	86GAU 01	<u>Cu (ug/g)</u>				
24	1		ICPES	85WHI 02	14.6	0.3		RTNA	84BYR 02
<u>Be (ng/g)</u>					15	1.8		ICPES	85ISS 01
6	0.4		FAA	86GAU 01	15.9	0.2		HPLC	85ICH 01
7.2			FAAC	86GAU 01	16	0.56	11	AA	75ISA 01
7.6	1.6		FAAC	85GAU 04	17	0.14	11	AA	75ISA 01
<u>Br (ug/g)</u>					17	4		AA	85GAU 01
8.36			ITNA	86GAU 01	<u>Dy (ng/g)</u>				
<u>Ca (%)</u>					43	7		RTNA	86TSU 01
3.07	0.0055	11	AA	75ISA 01	<u>Er (ng/g)</u>				
3.12	0.25		ICPES	85ISS 01	22	3		RTNA	86TSU 01
3.14	0.0053	11	AA	75ISA 01	<u>Eu (ng/g)</u>				
3.15	0.29		ICPES	85LYO 01	12	0.2		RTNA	83TJI 01
3.19	0.03		ICPES	85WHI 02	15	1		RTNA	86TSU 01
3.47	0.05		TCGS	83AND 01	<u>F (ug/g)</u>				
<u>Cd (ng/g)</u>					4			COLOR	83JAC 01
37	3		RTNA	84BYR 02					
55	3		AA	86GAU 01					

TABLE 1572-2: INDIVIDUAL DATA FOR NBS SRM 1572 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Fe (ug/g)</u>					<u>Mg (ug/g)</u>				
95	7.6	11	AA	75ISA 01	5180	270		AA	86GAU 01
96	8.6	11	AA	75ISA 01	5500	300		ICPES	85LYO 01
102.8	10.5		ICPES	85LYO 01	5600	1.7	11	AA	75ISA 01
109	8		ICPES	85ISS 01	5600	100		ICPES	85WHI 02
					5600	600		ICPES	85ISS 01
					5700	3	11	AA	75ISA 01
<u>Gd (ng/g)</u>					<u>Mn (ug/g)</u>				
39	6		RTNA	86TSU 01	21	1		ICPES	85WHI 02
<u>H (%)</u>					22	3		ICPES	85ISS 01
5.96	0.01		TCGS	83AND 01	22	6		TCGS	83AND 01
<u>Hg (ng/g)</u>					23	0.12	11	AA	75ISA 01
77	3		RTNA	84DEL 01	23.3	0.7		RTNA	84BYR 02
83	2		RTNA	84BYR 02	24.1	1.9		ICPES	85LYO 01
83	3		CVAA	86GAU 01	25	0.5	11	AA	75ISA 01
<u>Ho (ng/g)</u>					<u>Mo (ng/g)</u>				
8	1		RTNA	86TSU 01	150	15		RTNA	84BYR 02
<u>I (ug/g)</u>					153	16		RTNA	84BYR 01
1.29	0.05		IENA	84FAR 01	<u>N (%)</u>				
1.62	0.08		RTNA	84BYR 02	3.62	0.04		TCGS	83AND 01
<u>K (%)</u>					<u>Na (ug/g)</u>				
1.78	0.0004	11	AA	75ISA 01	162	15		ICPES	85ISS 01
1.8	0.0011	11	AA	75ISA 01	163			ITNA	86GAU 01
1.84	0.03		ICPES	85WHI 02	164	13		ICPES	85WHI 02
1.84	0.11		ICPES	85ISS 01	<u>Nd (ng/g)</u>				
1.889	0.007		TCGS	83AND 01	202	28		RTNA	86TSU 01
<u>La (ng/g)</u>					432	73		RTNA	83TJI 01
192	28		RTNA	86TSU 01	<u>Ni (ng/g)</u>				
203	16		RTNA	83TJI 01	600	50		FAA	86GAU 01
<u>Li (ng/g)</u>					830	190		HPLC	85ICH 01
150	20		AAC	85GAU 04	<u>P (ug/g)</u>				
190	10		AA	86GAU 01	1300			ICPES	85WHI 02
350	50		AA	85GAU 04	1300	100		ICPES	85ISS 01
<u>Lu (ng/g)</u>					1332	11		ICPES	84PRI 01
1.1	0.1		RTNA	83TJI 01	1800	100		ICPES	85LYO 01
2	0.4		RTNA	86TSU 01					

TABLE 1572-2: INDIVIDUAL DATA FOR NBS SRM 1572 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Pb (ug/g)</u>					<u>Sr (ug/g)</u>				
13.2	0.5		HPLC	85ICH 01	93	5		IENA	85GAU 04
13.6	1.1		FAA	85GAU 04	97	1		AA	85GAU 04
					99.3	3.5		CPAA	85MAS 01
<u>Pt (pg/g)</u>					100.6	2.6		IDNAA	85YAG 01
60	30		RTNA	82ZEI 01	102	1		AA	86GAU 01
<u>S (ug/g)</u>					<u>Tb (ng/g)</u>				
3600			TURB	84JAC 01	9	2		RTNA	86TSU 01
3822	58		ICPES	84PRI 01	9	2		RTNA	83TJI 01
3990	90		CB	86BOW 01	<u>Ti (ug/g)</u>				
4000	300		CB	84GLA 11	22	1		FAA	86GAU 01
4066	22		IDMS	84KEL 01	<u>U (ng/g)</u>				
4140		D	CB	85JAC 01	37	5		DNA	85GAU 04
4140	100	6	CB	84JAC 01	41			DNA	84GLA 02
4160		D	CB	85JAC 01	41	5		DNA	86GAU 01
4160	70	6	CB	84JAC 01	<u>V (ng/g)</u>				
4400	200		TCGS	83AND 01	235	14		RTNA	84BYR 02
4590	70		ICPES	85WHI 02	245	5		IDMS	85FAS 02
<u>S-32/34 (ratio)</u>					<u>W (ng/g)</u>				
22.631			IDMS	84KEL 01	8.1	0.5		RTNA	84BYR 01
<u>S-33/34 (ratio)</u>					<u>Yb (ng/g)</u>				
0.1781			IDMS	84KEL 01	8	1		RTNA	83TJI 01
<u>Sb (ng/g)</u>					15	3		RTNA	86TSU 01
34	1		RTNA	84BYR 02	<u>Zn (ug/g)</u>				
<u>Sc (ng/g)</u>					28	1		ICPES	85WHI 02
10	3		ITNA	86GAU 01	29	4		ICPES	85ISS 01
10.2	1.1		ITNA	84GLA 11	29.7	0.5		HPLC	85ICH 01
11			ITNA	85GAU 04	30	1.5	11	AA	75ISA 01
<u>Si (%)</u>					31	0.62	11	AA	75ISA 01
0.19	0.06		TCGS	83AND 01	31.8	4.1		ICPES	85LYO 01
<u>Sm (ng/g)</u>									
49	4		RTNA	83TJI 01					
52	8		RTNA	86TSU 01					

TABLE 1573-1: COMPILED DATA FOR NBS SRM 1573 TOMATO LEAVES (revised 3/1/86)

ELE	UNITS	NBS		CONSENSUS		MEDIAN	RANGE	AA		NAA		Mean \pm SD		OTHER METHODS	
		Mean \pm SD	(n)	Mean \pm SD	(n)			Mean \pm SD	(n)	Mean \pm SD	(n)	Method	(n)	Method	(n)
Ag	ng/g	---	(1)	180	(1)	---	---	---	(1)	180	(1)	---	---	---	---
Al	ug/g	1200	(10)	1000 \pm 300	(10)	1160	628 - 1300	1250	(1)	1268 \pm 39	(3)	850 \pm 300	(5)	ICPES	427 (2) COLOR
As	ng/g	270 \pm 50	(24)	253 \pm 36	(24)	260	170 - 310	262 \pm 37	(13)	231 \pm 30	(8)	270	(1)	ICPES	290 (1) COLOR
As	ng/g	---	---	---	---	---	---	---	---	---	---	---	---	---	270 (1) MPOES
Au	ng/g	---	(1)	0.8	(1)	---	---	---	(1)	0.8	(1)	---	---	---	---
B	ug/g	30	(18)	33 \pm 4	(18)	34	25.5 - 38	---	---	---	---	34 \pm 5	(5)	ICPES	34 \pm 2 (3) TCGS
B	ug/g	---	---	---	---	---	---	---	---	---	---	33 \pm 5	(11)	OES	---
Ba	ug/g	---	(10)	57 \pm 9	(10)	58	40 - 69	---	(3)	63 \pm 6	(3)	64.7	(2)	ICPES	---
Be	ng/g	---	(2)	32	(2)	---	26 - 38	---	---	---	---	26	(1)	ICPES	38 (1) FAAC
Br	ug/g	26	(11)	21 \pm 2	(11)	21	19 - 25.31	---	(10)	22 \pm 2	(10)	20.3	(1)	XRF	---
C	%	---	(3)	37.78 \pm 0.12	(3)	37.8	37.67 - 37.92	---	---	---	---	37.80 \pm 0.12	(3)	CB	---
Ca	%	3.00 \pm 0.03	(31)	2.83 \pm 0.23	(31)	2.88	2.38 - 3.28	2.84 \pm 0.06	(4)	2.7 \pm 0.4	(3)	2.97 \pm 0.08	(10)	ICPES	2.76 \pm 0.14 (3) XRF
Cd	ug/g	3	(28)	2.5 \pm 0.2	(28)	2.55	2.1 - 3	2.5 \pm 0.3	(13)	2.7	(1)	2.58 \pm 0.20	(9)	ICPES	2.65 \pm 0.13 (3) ASV
Cd	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	2.25 (2) POL
Ce	ug/g	1.6	(4)	1.3 \pm 0.2	(4)	1.28	1 - 1.56	---	(4)	1.3 \pm 0.2	(4)	---	---	---	---
Cl	%	---	(4)	1.07 \pm 0.03	(4)	1.05	1.04 - 1.10	---	(4)	1.07 \pm 0.03	(4)	---	---	---	---
Co	ng/g	600	(7)	525 \pm 46	(7)	510	467 - 610	518 \pm 28	(3)	531 \pm 60	(4)	---	---	---	---
Cr	ug/g	4.5 \pm 0.5	(19)	4.0 \pm 0.5	(19)	3.9	3 - 4.6	4.3 \pm 0.3	(7)	3.8 \pm 0.5	(5)	3.6 \pm 0.9	(5)	ICPES	4.15 (2) XRF
Cs	ng/g	---	(7)	57 \pm 8	(7)	56	43 - 70	---	(7)	57 \pm 8	(7)	---	---	---	---
Cu	ug/g	11 \pm 1	(51)	11 \pm 2	(51)	10.81	6.9 - 15	11.6 \pm 0.9	(12)	11 \pm 3	(7)	9.6 \pm 0.8	(11)	ICPES	9 \pm 3 (3) XRF
Cu	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	11 (2) AF
Cu	ug/g	---	---	---	---	---	---	---	---	---	---	7.7	(2)	POL	10.6 (1) IDMS
Cu	ug/g	---	---	---	---	---	---	---	---	---	---	11	(1)	CPAA	10.8 (2) COLOR
Dy	ng/g	---	(1)	68	(1)	---	---	---	(1)	68	(1)	---	---	---	---
Er	ng/g	---	(1)	51	(1)	---	---	---	(1)	51	(1)	---	---	---	---
Eu	ng/g	40	(5)	22 \pm 6	(5)	25	15 - 27	---	(5)	22 \pm 6	(5)	---	---	---	---

TABLE 1573-1: COMPILED DATA FOR NBS SRM 1573 TOMATO LEAVES (cont.)

ELE	UNITS	NBS		CONSENSUS		MEDIAN	RANGE		AA		NAA		Mean \pm SD		OTHER METHODS	
		Mean \pm SD	(n)	Mean \pm SD	(n)		Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)	Method	(n) Method
F	ug/g	---		5.5 \pm 0.4	(4)	5.4	5 - 6		---		---		5.7 \pm 0.3	(3)	ISE	(1) MS
Fe	ug/g	690 \pm 25	(43)	580 \pm 110	(43)	604	340 - 706	(8)	585 \pm 115	(8)	628 \pm 97	(7)	620 \pm 50	(11)	ICPES	(2) XRF
Fe	ug/g	---		---		---	---		---		---		592 \pm 15	(3)	COLOR	(1) VOLT
Fe	ug/g	---		---		---	---		---		---		675.8	(1)	CPAA	(2) AF
Fe(II)	ug/g	---		540	(1)	---	---		---		---		540	(1)	VOLT	
Fe(III)	ug/g	---		158	(1)	---	---		---		---		158	(1)	VOLT	
Ga	ng/g	---		76.15	(2)	---	69.3 - 83	(1)	83	(1)	69.3	(1)	---			
Gd	ng/g	---		75	(2)	---	74 - 76		---		75	(2)	---			
H	%	---		5.08 \pm 0.07	(3)	5.1	5.00 - 5.14		---		---		5.12	(2)	CB	(1) TCGS
Hf	ng/g	---		250	(1)	---	---		---		250	(1)	---			
Hg	ng/g	100		103 \pm 22	(3)	91	90 - 128	(1)	91	(1)	109	(2)	---			
Ho	ng/g	---		13	(1)	---	---		---		13	(1)	---			
I	ng/g	---		323 \pm 58	(3)	300	280 - 390		---		335	(2)	300	(1)	PAA	
In	ng/g	---		0.96	(1)	---	---		---		0.96	(1)	---			
K	%	4.46 \pm 0.03	(28)	4.44 \pm 0.24	(28)	4.4	3.85 - 4.81	(6)	4.49 \pm 0.31	(6)	4.34 \pm 0.16	(5)	4.41 \pm 0.10	(7)	ICPES	(2) XRF
La	ng/g	900		710 \pm 70	(6)	677	630 - 800		---		710 \pm 70	(6)	---			
Lu	ng/g	---		9.3 \pm 2.5	(3)	9	7 - 12		---		9.3 \pm 2.5	(3)	---			
Mg	ug/g	7000		6850 \pm 330	(25)	6800	6100 - 7400	(4)	6850 \pm 170	(4)	6650	(2)	6740 \pm 180	(10)	ICPES	
Mn	ug/g	238 \pm 7	(43)	224 \pm 13	(43)	226	197 - 252	(11)	224 \pm 10	(11)	225 \pm 24	(6)	227 \pm 8	(12)	ICPES	(1) NM
Mn	ug/g	---		---		---	---		---		---		230 \pm 34	(3)	XRF	(2) AF
Mo	ug/g	---		0.53 \pm 0.09	(6)	0.5	0.4 - 0.65		---		0.64	(2)	0.48 \pm 0.05	(4)	ICPES	
N	%	5		4.93 \pm 0.03	(3)	4.94	4.9 - 4.95		---		---		4.94	(2)	CB	(1) TCGS
Na	ug/g	---		470 \pm 110	(19)	500	326 - 650	(4)	440 \pm 130	(4)	515 \pm 62	(5)	420 \pm 110	(5)	ICPES	
Nd	ng/g	---		620 \pm 70	(3)	580	566 - 700		---		620 \pm 70	(3)	---			
Ni	ug/g	---		1.3 \pm 0.2	(7)	1.2	1.1 - 1.7		---		1.2	(1)	1.3 \pm 0.2	(6)	ICPES	

TABLE 1573-1: COMPILED DATA FOR NBS SRM 1573 TOMATO LEAVES (cont.)

ELE	UNITS	NBS		CONSENSUS		MEDIAN	RANGE	AA		NAA		OTHER METHODS					
		Mean ± SD		Mean ± SD	(n)			Mean ± SD	(n)	Mean ± SD	(n)	Method	Mean ± SD	(n)	Method		
P	ug/g	3400 ± 200		3370 ± 220	(28)	3318	2800 - 3900	3350 ± 130	(4)	3420	(1)	3430 ± 210	(13)	ICPES	3400	(1)	CPAA
Pb	ug/g	6.3 ± 0.3		5.9 ± 0.8	(41)	6	4 - 8.1	5.9 ± 0.4	(27)	---		6.8 ± 1.9	(6)	ICPES	5.9	(1)	XRF
Pb	ug/g	---		---		---	---	---		---		6.03	(1)	IDMS	6.23	(1)	CPAA
Pb	ug/g	---		---		---	---	---		---		5.5 ± 1.1	(4)	ASV	3.85	(2)	POL
Pd	ng/g	---		< 2		---	---	---		< 2		---			---		
Pr	ng/g	---		187	(2)	---	184 - 190	---		187	(2)	---			---		
Rb	ug/g	16.5 ± 0.1		17.3 ± 2.5	(7)	16.5	15.16 - 22	---		17 ± 2	(6)	19.2	(1)	XRF	---		
S	ug/g	---		6200 ± 400	(8)	5960	5500 - 6900	---		---		6374	(2)	ICPES	5960	(1)	XRF
S	ug/g	---		---		---	---	---		---		6100 ± 400	(5)	CB	---		
Sb	ng/g	---		36 ± 7	(5)	34	30 - 46	34	(1)	36 ± 8	(4)	---			---		
Sc	ng/g	130		173 ± 26	(9)	170	138 - 220	---		173 ± 26	(9)	---			---		
Se	ng/g	---		54 ± 6	(4)	50	49 - 61	---		49.5	(2)	59	(2)	GC	---		
Si	ug/g	---		3000	(1)	---	---	---		---		3000	(1)	ICPES	---		
Sm	ng/g	---		92 ± 16	(3)	86	81 - 110	---		92 ± 16	(3)	---			---		
Sr	ug/g	44.9 ± 0.3		42 ± 5	(12)	43.7	35.6 - 54	42.95	(2)	49 ± 15	(3)	36	(1)	ICPES	44	(1)	XRF
Sr	ug/g	---		---		---	---	---		---		45.3	(1)	IDNAA	43.85	(2)	CPAA
Ta	ng/g	---		430	(1)	---	---	---		430	(1)	---			---		
Tb	ng/g	---		9 ± 5	(3)	12	4 - 12	---		9 ± 5	(3)	---			---		
Th	ng/g	170 ± 30		205	(2)	---	190 - 220	---		205	(2)	---			---		
Ti	ug/g	---		56 ± 39	(3)	68	12.6 - 89	---		68	(1)	12.6	(1)	ICPES	89	(1)	COLOR
Tl	ng/g	50		22	(2)	---	20 - 24	---		---		22	(2)	ASV	---		
U	ng/g	61 ± 3		59 ± 6	(6)	60	50.2 - 63	---		59 ± 6	(6)	---			---		
V	ug/g	---		1.2 ± 0.2	(8)	1.27	0.87 - 1.5	---		1.1 ± 0.2	(5)	1.37 ± 0.16	(3)	ICPES	---		
W	ng/g	---		< 40		---	---	---		< 40		---			---		
Yb	ng/g	---		63 ± 16	(3)	63	47 - 80	---		63 ± 16	(3)	---			---		
Zn	ug/g	62 ± 6		61 ± 4	(45)	61	52 - 71	62 ± 5	(11)	61 ± 5	(5)	61 ± 4	(16)	ICPES	62.5	(1)	CPAA
Zn	ug/g	---		---		---	---	---		---		59	(2)	AF	62.9	(2)	POL
Zn	ug/g	---		---		---	---	---		---		65 ± 9	(3)	XRF	---		

TABLE 1573-2: INDIVIDUAL DATA FOR NBS SRM 1573 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ag (ng/g)</u>					<u>As (ng/g) cont.</u>				
180	50		RTNA	80SLO 01	290	10	11	HAA	82JON 01
					290	20	11	HAA	82JON 01
<u>Al (ug/g)</u>					300	30		FAA	80DUP 01
182			OES	75JON 02	310	10		HAA	80TAM 01
228			OES	75JON 11	330	30		IENA	82GLA 02
280			OES	75JON 07	<u>Au (ng/g)</u>				
286			OES	75JON 08	0.8	0.1		RTNA	80SLO 01
296			OES	75JON 06	<u>B (ug/g)</u>				
321	37	11	ICPES	81MUN 01	25.5	1.1		ICPES	79HER 01
356			OES	75JON 03	26			OES	75JON 10
382			OES	75JON 04	28			OES	75JON 02
391			OES	75JON 09	29			OES	75JON 07
417.4	8.3	6	COLOR	85BAR 01	30			OES	75JON 04
436.3	11.5	6	COLOR	85BAR 01	32			OES	75JON 03
495			OES	75JON 05	32			OES	75JON 01
628			ICPES	81GOO 01	32			OES	75JON 06
639	21		ICPES	83SCH 03	32	3	35	TCGS	81GLA 04
661	18	11	ICPES	81MUN 01	34	2.8	11	ICPES	81MUN 01
835			OES	75JON 01	35			OES	75JON 09
1160			ICPES	84NAD 01	35	4		TCGS	84GLA 11
1170	60	11	ICPES	82JON 01	35.5			ICPES	81GOO 01
1225	239		ITNA	77NAD 02	36	3		TCGS	82GLA 02
1250	200		AA	83RAP 01	36.1	1.5	11	ICPES	81MUN 01
1280			ITNA	82GLA 02	37			OES	75JON 08
1300	80		ITNA	80SLO 01	37			OES	75JON 05
<u>As (ng/g)</u>					38	0.1		ICPES	84PRI 01
118	10	7	FAA	82HOE 02	42			OES	75JON 11
170	10	7	FAA	82HOE 02	<u>Ba (ug/g)</u>				
180	40		ITNA	85NDI 01	40			OES	75JON 03
200	40		RTNA	80SLO 01	47			OES	75JON 04
225	3		RTNA	79HOE 01	49			OES	75JON 11
230	30	7	RTNA	80GAL 02	56.5	11.24		NAA	76GUZ 01
230	30	11	HAA	81RAP 01	58			OES	75JON 05
240			IENA	84GLA 02	59			OES	75JON 01
240	25		RTNA	85GAU 04	63	5		ITNA	77NAD 02
245	5	7	FAA	82HOE 02	63.4			ICPES	84NAD 01
250	30		HAA	81KNA 01	66	3		ICPES	85WHI 02
250	30	11	HAA	81RAP 01	69	14		ITNA	79REN 03
260			HAA	81ARA 01	<u>Be (ng/g)</u>				
260	30		ITNA	77NAD 02	26	10		ICPES	83SCH 03
260	30	11	HAA	81RAP 01	38	4		FAAC	85GAU 04
260	80		HAA	81YAN 01					
270		H	ICPES	81PIC 01					
270	40		RTNA	86GAU 01					
270	50		MPOES	83SAR 01					
290	10		AA	83RAP 01					
290	10		COLOR	77BUR 01					

TABLE 1573-2: INDIVIDUAL DATA FOR NBS SRM 1573 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Br (ug/g)</u>					<u>Ca (%) cont.</u>				
19	1.5	5	ITNA	80HOE 01	3.1			ITNA	82GLA 02
19.8	0.6	5	IENA	79GLA 02	3.1	0.03	11	ICPES	82JON 01
20.1	1.2	5	ITNA	80HOE 01	3.19			OES	75JON 06
20.3	1.1		CPXRF	84BIS 01	3.28			OES	75JON 01
20.8	2.4		ITNA	80SLO 01	3.41	0.09		ICPES	79HER 01
21	1.2	5	IENA	79GLA 02	3.49	0.12		ITNA	77NAD 02
21	3		ITNA	79REN 03	3.55			ICPES	84NAD 01
21.9	0.2		ITNA	77NAD 02	5.82			EXRF	81PAR 01
22.5			ITNA	85GAU 04					
24.6			ITNA	86GAU 01					
25.31	1		ITNA	77STE 02					
29	2	35	NAA	81GLA 03	1.6		11	FAA	80PRE 01
54			EXRF	81PAR 01	2.1		6	POL	72SIN 01
					2.2		11	FAA	80PRE 01
<u>C (%)</u>					2.3		11	FAA	80PRE 01
					2.3			FAA	80PRE 01
37.67	0.45		CB	82GLA 02	2.3		11	FAA	80PRE 01
37.8	0.9		CB	77WAT 02	2.3			ICPES	84NAD 01
37.92	0.26		CB	80SCH 02	2.3		11	FAA	80PRE 01
					2.3	0.1		FAA	80LEG 01
<u>Ca (%)</u>					2.4	0.01	11	ICPES	82JON 01
					2.4	0.22	6	POL	72SIN 01
2.22	0.08		ITNA	80SLO 01	2.5			FAA	82PRE 01
2.38			OES	75JON 04	2.5			ASV	82GAJ 01
2.4	0.07		ITNA	79REN 03	2.5	0.1		ICPES	83SCH 03
2.42			OES	75JON 07	2.55	0.09	11	ICPES	82JON 01
2.43			OES	75JON 03	2.56	0.06	11	ICPES	82JON 01
2.55			OES	75JON 02	2.6	0.1	11	ICPES	82JON 01
2.62			OES	75JON 08	2.6	0.2		FAA	84GLA 11
2.64			OES	75JON 10	2.6	0.3	11	ICPES	81MUN 01
2.65	0.07	6	EXRF	79MAT 01	2.66	0.1		FAA	83DEL 01
2.7	0.02		CPXRF	84BIS 01	2.7			ASV	74COP 01
2.70	0.21		NAA	76GUZ 01	2.7	0.4		RTNA	80SLO 01
2.75	0.005	11	AA	75ISA 01	2.7	0.5	11	ICPES	81MUN 01
2.8			OES	75JON 11	2.74	0.2		ASV	82SAT 02
2.85			ICPES	81GOO 01	2.8	0.2		AA	80SCH 05
2.86	0.05	11	AA	84SUZ 03	2.8	0.2		FAA	84GLA 02
2.87	0.005	11	AA	75ISA 01	2.8	0.2	D	FAA	80SCH 08
2.88	0.27		ICPES	85LYO 01	2.9	0.1		FAA	81KNA 01
2.9	0.05	11	AA	84SUZ 03	2.94	0.15		AA	83RAP 01
2.91			OES	75JON 05	3	0.16		ICPES	83SCH 04
2.91	0.08		ICPES	85WHI 02	3.3	0.2		ICPES	79HER 01
2.92			OES	75JON 09					
2.92	0.08	6	EXRF	79MAT 01	<u>Ce (ug/g)</u>				
2.92	0.12	11	ICPES	81MUN 01					
2.93	0.045		ICPES	83SCH 03	1	0.1		RTNA	80SLO 01
2.99	0.05	11	ICPES	82JON 01	1.28	0.18		ITNA	86KRA 01
2.99	0.12	11	ICPES	81MUN 01	1.3	0.36		RTNA	83TJI 01
3.04	0.05	11	ICPES	82JON 01	1.559	0.114		RTNA	86TSU 01
3.08	0.05	11	ICPES	82JON 01					

TABLE 1573-2: INDIVIDUAL DATA FOR NBS SRM 1573 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Cl (%)</u>					<u>Cs (ng/g)</u>				
1.04	0.02		ITNA	80SLO 01	43	2		ITNA	77NAD 02
1.05	0.0725		ITNA	77STE 02	54	4		ITNA	84GLA 02
1.085	0.1201		NAA	76GUZ 01	56			ITNA	86GAU 01
1.1	0.07		ITNA	77NAD 02	56	6		ITNA	77GUZ 01
					58	4		ITNA	84GLA 11
					64	21		ITNA	86KRA 01
					70	8		ITNA	85GAU 04
					140	30		ITNA	79REN 03
<u>Co (ng/g)</u>					<u>Cu (ug/g)</u>				
400	106		NAA	76GUZ 01	3			AA	81ARA 01
467	25		ITNA	77GUZ 01	6.1	1.1		ITNA	85NDI 01
495			FAA	82HOE 01	6.9	0.7		CPXRF	84BIS 01
507	20		ITNA	86KRA 01	7.3	0.7		XRF	85AVA 01
510	10	11	FAA	80FUD 01	7.7		6	POL	72SIN 01
540	30		RTNA	80SLO 01	7.7	0.5	6	POL	72SIN 01
550	10	11	FAA	80FUD 01	8			ICPES	81GOO 01
610	30		ITNA	77NAD 02	8.2	0.4	11	ICPES	82JON 01
680	30		ITNA	79REN 03	8.7	1.9		AA	84KAN 01
<u>Cr (ug/g)</u>					9			OES	75JON 02
1.5	0.2	11	ICPES	81MUN 01	9.4		6	NAA	72SIN 01
2.28	0.06	11	ICPES	82JON 01	9.4	0.5	11	ICPES	81MUN 01
2.5	0.2	11	ICPES	81MUN 01	9.5	0.2	11	ICPES	82JON 01
3			ICPES	81GOO 01	9.5	0.3	11	ICPES	81MUN 01
3.1		11	AA	79HOE 02	9.7	0.3		ICPES	83SCH 03
3.107	1.08		NAA	76GUZ 01	9.8	0.3		ICPES	83SCH 04
3.7	0.3		ITNA	82GLA 02	9.8	0.4	11	ICPES	82JON 01
3.8	0.2	11	ICPES	82JON 01	10			OES	75JON 03
3.8	0.3	35	FAA	81GLA 03	10.1	0.4		RTNA	74RAV 01
3.8	0.61		ITNA	85NDI 01	10.4	0.2		ICPES	79HER 01
3.9	0.3		ITNA	77NAD 02	10.4	0.5	11	ICPES	82JON 01
3.9	1.1	11	CPXRF	84SIM 01	10.4	0.6		VV	80SCH 05
3.94		11	AA	79HOE 02	10.5	0.8		RTNA	80SLO 01
4.3			FAA	82HOE 01	10.6	0.1		IDMS	84BRO 03
4.3			AA	81ARA 01	10.6	0.5		AA	83RAP 01
4.3	0.2		AA	83RAP 01	10.7	0.4		ICPES	80SCH 08
4.3	0.5		ICPES	83SCH 03	10.8	0.1		COLOR	76ZAN 02
4.4	0.2	11	CPXRF	84SIM 01	10.81	0.02		COLOR	77BUR 01
4.4	0.2	D	CPXRF	84SIM 02	10.9	0.1	D	AA	76ZAN 02
4.5	1.6		ITNA	79REN 03	10.9	0.1		AA	76ZAN 01
4.53			ICPES	84NAD 01	11			FAA	83ATS 01
4.6		11	AA	79HOE 02	11			OES	75JON 04
4.6	0.7		FAA	85GAU 04	11	1	11	AA	84SUZ 03
5.15	0.29		ITNA	86KRA 01	11	1	6	AF	83MCC 02
5.9	0.2		ICPES	79HER 01	11	2	6	AF	83MCC 02
					11	2.4		CPAA	85CAN 01
					11.1	0.2	7	RTNA	80GAL 02
					11.2		11	AA	79HOE 02
					11.2	0.2		AA	85KOJ 01

TABLE 1573-2: INDIVIDUAL DATA FOR NBS SRM 1573 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Cu (ug/g) cont.</u>					<u>Fe (ug/g)</u>				
11.5	0.2		AA	76EPS 02	55			OES	75JON 01
12		11	AA	79HOE 02	162			OES	75JON 09
12	0.14	11	AA	75ISA 01	207	6.3	11	AA	84SUZ 03
12	0.17	11	AA	75ISA 01	220			AA	81ARA 01
12.2	1.3	6	EXRF	79MAT 01	266			OES	75JON 06
13			OES	75JON 10	267			OES	75JON 03
13	0.7	11	AA	84SUZ 03	340			OES	75JON 02
13.5	0.4		AA	77GUZ 01	342			OES	75JON 04
14.1	1.3		ITNA	77GUZ 01	350			OES	75JON 11
14.1	5.64		NAA	76GUZ 01	361	50	11	ICPES	81MUN 01
15			OES	75JON 09	379			OES	75JON 08
15			OES	75JON 01	442	115	11	AA	75ISA 01
15			OES	75JON 11	450	17	11	AA	84SUZ 03
15			OES	75JON 06	463	157	11	AA	75ISA 01
15	3		AA	86GAU 01	469.25	118.3		NAA	76GUZ 01
17			OES	75JON 05	478			OES	75JON 05
17			OES	75JON 08	507.6	14.3		ITNA	77GUZ 01
20			OES	75JON 07	531	14	11	ICPES	82JON 01
25			EXRF	81PAR 01	534			OES	75JON 10
					546	19		ICPES	83SCH 03
					550	36		CPXRF	84BIS 01
<u>Dy (ng/g)</u>					552			OES	75JON 07
68	4		RTNA	86TSU 01	568	3		ICPES	79HER 01
					575	10	11	COLOR	82SCH 03
<u>Er (ng/g)</u>					597		11	COLOR	82SCH 03
51	3		RTNA	86TSU 01	602	28	6	FAA	84FUD 02
					604	11	11	COLOR	82SCH 03
<u>Eu (ng/g)</u>					614	14	6	AF	83MCC 02
15	2		ITNA	77GUZ 01	623	10	6	EXRF	79MAT 01
16	3		RTNA	83TJI 01	625	14	11	ICPES	82JON 01
25	5		ITNA	77NAD 02	632			ICPES	81GOO 01
26	1		RTNA	86TSU 01	636	65		ICPES	85LYO 01
27	7		ITNA	86KRA 01	642	17	11	ICPES	82JON 01
55	8		RTNA	80SLO 01	657			ICPES	84NAD 01
<u>F (ug/g)</u>					658	13	11	ICPES	82JON 01
5	1		MS	77STE 02	661	14		ITNA	77NAD 02
5.4	1.3		ISE	85GAU 04	665		11	AA	79HOE 02
5.7	0.2		ISE	83KNA 01	668	25	11	ICPES	81MUN 01
6	0.7		ISE	84GLA 02	670	50	35	ITNA	81GLA 03
9			COLOR	83JAC 01	672		11	AA	79HOE 02
					674	97		ITNA	86KRA 01
					675.8	18.9		CPAA	85CAN 01
					684	9	6	FAA	84FUD 02
					685	20	0	ICPES	80SCH 08
					685	20		ICPES	80SCH 05
					685	50	6	AF	83MCC 02
					698			VOLT	81SZY 01
					705	30		AA	83RAP 01
					706	12		ITNA	79DAS 01
					706	12		RTNA	80SLO 01
					730	90		ITNA	79REN 03
					831	10	6	EXRF	79MAT 01
					1170			EXRF	81PAR 01

TABLE 1573-2: INDIVIDUAL DATA FOR NBS SRM 1573 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Fe(II) (ug/g)</u>					<u>K (%)</u>				
540			VOLT	81SZY 01	2.68	0.26	11	ICPES	81MUN 01
					2.9			ICPES	84NAD 01
<u>Fe(III) (ug/g)</u>					3	0.29		ICPES	79HER 01
					3.8			OES	75JON 02
158			VOLT	81SZY 01	3.81			OES	75JON 10
					3.85			OES	75JON 07
<u>Ga (ng/g)</u>					4.055		1	AA	78SZY 01
					4.15	0.08		ITNA	79REN 03
69.3	67		NAA	76GUZ 01	4.17		1	AA	78SZY 01
83			FAA	85XIA 01	4.18	0.4		ITNA	86KRA 01
<u>Gd (ng/g)</u>					4.25			OES	75JON 04
					4.3	0.2	11	ICPES	82JON 01
					4.33			OES	75JON 08
74	15		RTNA	83TJI 01	4.34	0.18		ICPES	85WHI 02
76	5		RTNA	86TSU 01	4.34	0.23	11	ICPES	81MUN 01
<u>H (%)</u>					4.39	0.09		CPXRF	84BIS 01
					4.4	0.1	11	ICPES	82JON 01
					4.4	0.2	11	ICPES	82JON 01
5	0.1	35	TCGS	79GLA 04	4.4272	0.2816		NAA	76GUZ 01
5.1	0.2		CB	82GLA 02	4.47	0.15		ITNA	80SLO 01
5.14	0.07		CB	80SCH 02	4.47	0.24		ITNA	77NAD 02
<u>Hf (ng/g)</u>					4.49			ICPES	79COO 01
					4.51			OES	75JON 09
					4.58			OES	75JON 03
250	20		ITNA	86KRA 01	4.58	0.0046	11	AA	75ISA 01
<u>Hg (ng/g)</u>					4.6			OES	75JON 06
					4.6	0.0083	11	AA	75ISA 01
					4.6	0.2	11	ICPES	82JON 01
90	8		ITNA	77NAD 02	4.73	0.14	11	AA	84SUZ 03
91	11		CVAA	82GLA 02	4.74			OES	75JON 05
128	118		NAA	76GUZ 01	4.79	0.06	6	EXRF	79MAT 01
<u>Ho (ng/g)</u>					4.8			OES	75JON 11
					4.81	0.09	11	AA	84SUZ 03
					5.16	0.06	6	EXRF	79MAT 01
13	1		RTNA	86TSU 01	5.72			OES	75JON 01
<u>I (ng/g)</u>					9.24			EXRF	81PAR 01
<u>Ia (ng/g)</u>					<u>La (ng/g)</u>				
280	30		IENA	82SAT 01	346	79		NAA	76GUZ 01
300	100		PAA	77WIL 01	630	90		ITNA	86KRA 01
390	120		RTNA	77STE 02	640	40		ITNA	77NAD 02
<u>In (ng/g)</u>					677	13		RTNA	86TSU 01
					766	199		RTNA	83TJI 01
0.96	0.08		RTNA	74RAV 01	770	110		RTNA	80SLO 01
					800	200		ITNA	79REN 03

TABLE 1573-2: INDIVIDUAL DATA FOR NBS SRM 1573 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Lu (ng/g)</u>					<u>Lu (ug/g) cont.</u>				
7	1		RTNA	83TJI 01	215	27		FAA	84KUR 01
9	1		RTNA	86TSU 01	216	17	11	AA	75ISA 01
12	2		RTNA	80SLO 01	217		11	AA	79HOE 02
					217	5	11	ICPES	82JON 01
					217	16	11	ICPES	81MUN 01
					218	13	11	AA	75ISA 01
					219	7		ICPES	85WHI 02
					221	5	11	ICPES	82JON 01
					222	5	11	ICPES	82JON 01
					223		11	AA	79HOE 02
					223	7	6	EXRF	79MAT 01
					224	2.6	11	AA	84SUZ 03
					225.6	17		ICPES	85LYO 01
					227			OES	75JON 05
					227	7	6	AF	83MCC 02
					230			OES	75JON 03
					230	5	11	ICPES	82JON 01
					230	9	6	AF	83MCC 02
					231	3.6	11	AA	84SUZ 03
					231	8	11	ICPES	81MUN 01
					231	10		ITNA	80SLO 01
					232			ICPES	84NAD 01
					233	13		ICPES	83SCH 03
					234	5		VV	80SCH 05
					234	5	D	ICPES	80SCH 08
					235	2		NM	84SUZ 01
					235	4	6	FAA	84FUD 02
					235	5		ICPES	79HER 01
					236	5	6	FAA	84FUD 02
					238	17		ITNA	77NAD 02
					240	4		ICPES	83SCH 04
					241			OES	75JON 08
					241	12		AA	83RAP 01
					251			OES	75JON 01
					252			ICPES	81GOO 01
					266			ITNA	82GLA 02
					266	8	6	EXRF	79MAT 01
					414			EXRF	81PAR 01
<u>Mg (ug/g)</u>					<u>Mo (ug/g)</u>				
5365			ICPES	81GOO 01	0.4	0.2	11	ICPES	82JON 01
6000			OES	75JON 08	0.5	0.1	11	ICPES	82JON 01
6000	600		ITNA	80SLO 01	0.5	0.1	11	ICPES	82JON 01
6100	600		ICPES	79HER 01	0.5	0.3	11	ICPES	82JON 01
6300			OES	75JON 09	0.62	0.04		ITNA	77NAD 02
6400	400		ICPES	85LYO 01	0.65	0.1		RTNA	80SLO 01
6500	300		ICPES	85WHI 02	2.8			OES	75JON 10
6600			OES	75JON 07	4.2			OES	75JON 11
6672	186	11	ICPES	81MUN 01	4.5			OES	75JON 03
6700	3	11	AA	75ISA 01	11.7			OES	75JON 01
6700	3	11	AA	75ISA 01	14.6			OES	75JON 07
6700	200	11	ICPES	82JON 01	17.9			OES	75JON 02
6784	206	11	ICPES	81MUN 01					
6800			ICPES	84NAD 01					
6800			OES	75JON 10					
6800	90		ICPES	83SCH 03					
6900			OES	75JON 04					
6900	200	11	ICPES	82JON 01					
6900	200	11	ICPES	82JON 01					
7000			OES	75JON 03					
7000	100	11	AA	84SUZ 03					
7000	200	11	AA	84SUZ 03					
7000	200	11	ICPES	82JON 01					
7100			OES	75JON 02					
7300	100		ITNA	77NAD 02					
7400			OES	75JON 05					
7400			OES	75JON 06					
7400			OES	75JON 11					
7800			OES	75JON 01					
<u>Mn (ug/g)</u>					<u>Mo (ug/g)</u>				
138			OES	75JON 07	0.4	0.2	11	ICPES	82JON 01
189			OES	75JON 10	0.5	0.1	11	ICPES	82JON 01
189			OES	75JON 04	0.5	0.1	11	ICPES	82JON 01
197			OES	75JON 09	0.5	0.3	11	ICPES	82JON 01
198			OES	75JON 06	0.62	0.04		ITNA	77NAD 02
200			ITNA	79REN 03	0.65	0.1		RTNA	80SLO 01
200	9		CPXRF	84BIS 01	2.8			OES	75JON 10
209.18	9.93		NAA	76GUZ 01	4.2			OES	75JON 11
209.2	11.9		ITNA	77GUZ 01	4.5			OES	75JON 03
210			OES	75JON 02	11.7			OES	75JON 01
211.1	2.1		AA	77GUZ 01	14.6			OES	75JON 07
215			OES	75JON 11	17.9			OES	75JON 02

TABLE 1573-2: INDIVIDUAL DATA FOR NBS SRM 1573 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>N (%)</u>					<u>P (ug/g)</u>				
4.9	0.2	35	TCGS	79GLA 04	2400			OES	75JON 04
4.94	0.11		CB	80SCH 02	2700			ICPES	84NAD 01
4.95	0.08		CB	82GLA 02	2800			OES	75JON 10
					3030			ICPES	81GOO 01
<u>Na (ug/g)</u>					3100			OES	75JON 07
					3200			OES	75JON 05
326	18	11	ICPES	81MUN 01	3200	200	6	FAA	81LAN 01
332	4.9	11	AA	84SUZ 03	3263	130	11	ICPES	81MUN 01
337	13	11	ICPES	81MUN 01	3300			OES	75JON 09
337	23	11	AA	84SUZ 03	3300			OES	75JON 08
350			OES	75JON 04	3300			OES	75JON 11
369	16		ICPES	85WHI 02	3300			OES	75JON 06
388			OES	75JON 02	3300	200	6	FAA	81LAN 01
459	46.1		NAA	76GUZ 01	3300	200		ICPES	85WHI 02
475	25		ITNA	80SLO 01	3318	106	11	ICPES	81MUN 01
488		1	AA	78SZY 01	3320	160		ICPES	81OWE 01
500	200		ITNA	79REN 03	3400			OES	75JON 03
520			ICPES	81GOO 01	3400			FAA	79EDI 01
522	13		ITNA	77NAD 02	3400			ICPES	79EDI 01
531			OES	75JON 08	3400	100	11	ICPES	82JON 01
568			ICPES	84NAD 01	3400	200		CPAA	83MAS 02
602		1	AA	78SZY 01	3420	89.5		NAA	76GUZ 01
610			OES	75JON 06	3459	8		ICPES	84PRI 01
618	18		ITNA	86KRA 01	3500	100	11	ICPES	82JON 01
650			OES	75JON 03	3500	100	11	ICPES	82JON 01
800			OES	75JON 01	3500	100	11	ICPES	82JON 01
820			OES	75JON 09	3500	200	6	FAA	81LAN 01
950			OES	75JON 05	3700	100		ICPES	79HER 01
1090	70		ITNA	82SCH 05	3800			OES	75JON 02
1600			OES	75JON 11	3900	200		ICPES	85LYO 01
					5000			OES	75JON 01
<u>Nd (ng/g)</u>					<u>Pb (ug/g)</u>				
566	59		RTNA	86YSU 01	3.2		6	POL	72SIN 01
580	140		RTNA	83TJI 01	4			ASV	74COP 01
700	100		RTNA	80SLO 01	4.3	0.2	11	ICPES	82JON 01
					4.5	0.1	6	POL	72SIN 01
<u>Ni (ug/g)</u>					4.9		11	FAA	80PRE 01
<	1.5	11	ICPES	81MUN 01	5.0	0.2	11	ICPES	82JON 01
0.3	0.2		RTNA	80SLO 01	5.2	0.8		AA	84KAN 01
1.1	0.08	11	ICPES	82JON 01	5.4		6	FAA	81JAC 01
1.12	0.06	11	ICPES	82JON 01	5.5		11	FAA	79HOE 02
1.12	0.08	11	ICPES	82JON 01	5.5	0.4		FAA	80LEG 01
1.2	0.3		ITNA	77NAD 02	5.6		6	FAA	81JAC 01
1.3	0.2	11	ICPES	82JON 01	5.6	0.2		ASV	82SAT 02
1.5	0.8	11	ICPES	81MUN 01	5.7		11	FAA	79HOE 02
1.7	0.4		ICPES	83SCH 03	5.8		6	FAA	81HIN 01
5.9	0.6		ICPES	79HER 01	5.8		6	FAA	82KOI 01
					5.8		6	FAA	81HIN 01

TABLE 1573-2: INDIVIDUAL DATA FOR NBS SRM 1573 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Pb (ug/g) cont.</u>					<u>S (ug/g)</u>				
5.8		6	FAA	82K0I 01	5500	300		CB	84GLA 11
5.8	0.8		HAA	82WEI 01	5848	58		ICPES	84PRI 01
5.9		11	FAA	80PRE 01	5860	270		CB	86BOW 01
5.9	0.5		XRF	85AVA 01	5960	150		WXRF	86BOW 01
5.95	0.06		FAA	79DAB 02	6260		D	CB	85JAC 01
6			FAA	82HOE 01	6260	100	6	CB	84JAC 01
6		11	FAA	80PRE 01	6360	190		CB	86GAU 01
6			ASV	82GAJ 01	6550		D	CB	85JAC 01
6.0	0.5		FAA	84GLA 11	6550	90	6	CB	84JAC 01
6.03	0.15		IDMS	83BRO 01	6900	300		ICPES	85WHI 02
6.1			FAA	83HOE 01	<u>Sb (ng/g)</u>				
6.1		11	FAA	79HOE 02	30	1		RTNA	79HOE 01
6.1	0.3		AA	80SCH 05	30	2		RTNA	80KOS 02
6.1	0.3	D	FAA	80SCH 08	34			HAA	82KUE 03
6.2			FAA	80PRE 01	40	2		ITNA	77NAD 02
6.2	0.3		FAA	81KNA 01	46	20		ITNA	86KRA 01
6.23	0.97		CPAA	85CAN 01	120	30	7	RTNA	80GAL 02
6.3		11	FAA	80PRE 01	120	50		ITNA	79REN 03
6.3	0.5		ICPES	83SCH 03	<u>Sc (ng/g)</u>				
6.4	0.1		AA	83RAP 01	138	7		ITNA	77GUZ 01
6.4	0.3		FAA	82ATS 02	151	4		ITNA	84GLA 11
6.55	0.22		ASV	80SZY 01	160	30		ITNA	79REN 03
6.6			FAA	82PRE 01	164	16		ITNA	86GAU 01
7.1	0.9		FAA	82WEI 01	170	3		ITNA	77NAD 02
7.5		11	FAA	80PRE 01	175	1		ITNA	85GAU 04
7.6	3.1		FAA	85GAU 04	175	4		ITNA	86KRA 01
8.1	1.8	11	ICPES	81MUN 01	208	89		NAA	76GUZ 01
8.3	1.1		ICPES	79HER 01	220	30		RTNA	80SLO 01
9.1	2.9	11	ICPES	81MUN 01	<u>Se (ng/g)</u>				
15			EXRF	81PAR 01	49	5		ITNA	77NAD 02
<u>Pd (ng/g)</u>					50	20		RTNA	80KNA 01
<	2		RTNA	85BEM 01	57	3	11	GC	81UCH 02
<u>Pr (ng/g)</u>					61	2	11	GC	81UCH 02
184	11		RTNA	86TSU 01	84	15	9	ITNA	80WAN 01
190	40		RTNA	80SLO 01	<u>Si (ug/g)</u>				
<u>Rb (ug/g)</u>					3000			ICPES	84NAD 01
15.16	1.35		NAA	76GUZ 01	<u>Sm (ng/g)</u>				
15.21	2.3		ITNA	79REN 03	81	3		RTNA	86TSU 01
16.4	0.5		ITNA	77GUZ 01	86	27		RTNA	83TJI 01
16.5	0.7		ITNA	77NAD 02	110	15		RTNA	80SLO 01
16.8	0.9		ITNA	86KRA 01	200	90		ITNA	79REN 03
19.2	1.8		CPXRF	84BIS 01					
22	3	35	ITNA	81GLA 03					
40			EXRF	81PAR 01					

TABLE 1573-2: INDIVIDUAL DATA FOR NBS SRM 1573 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Sr (ug/g)</u>					<u>V (ug/g)</u>				
35.6	1.4		IENA	85GAU 04	0.31	0.045	11	RTNA	82HEY 02
36	0.6		ICPES	79HER 01	0.87	0.013	11	RTNA	82HEY 02
38			OES	75JON 04	0.888	0.013	11	RTNA	82HEY 02
38			OES	75JON 03	1.19	0.01	11	ICPES	82JON 01
42.2	0.8		AA	86GAU 01	1.27	0.035		RTNA	78BYR 01
42.9	0.5		CPAA	85CAN 01	1.297	0.112		ITNA	82HEY 02
43.7	0.2		AA	85GAU 04	1.3	0.2		ITNA	77NAD 02
44	2		CPXRF	84BIS 01	1.42	0.08	11	ICPES	82JON 01
44.8	0.5		CPAA	85MAS 01	1.5	0.2		ICPES	83SCH 03
45	1		ITNA	77NAD 02					
45.3	0.4		IDNAA	85YAG 01					
54			OES	75JON 01					
65.5	5.84		NAA	76GUZ 01					
102			EXRF	81PAR 01					
<u>Ta (ng/g)</u>					<u>W (ng/g)</u>				
					<	40	L	RTNA	80SLO 01
<u>Tb (ng/g)</u>					<u>Yb (ng/g)</u>				
					47	10		RTNA	83TJI 01
430	300		ITNA	79REN 03	63	4		RTNA	86TSU 01
					80	20		RTNA	80SLO 01
<u>Ti (ug/g)</u>					<u>Zn (ug/g)</u>				
4	1		RTNA	80SLO 01					
12	2		RTNA	86TSU 01	26			OES	75JON 09
12	4		RTNA	83TJI 01	29			ASV	74COP 01
					48			OES	75JON 10
<u>Th (ng/g)</u>					50			OES	75JON 03
190	20		ITNA	77NAD 02	52	1	11	ICPES	82JON 01
220	30		RTNA	80SLO 01	53			FAA	83ATS 01
					54	4		RTNA	80SLO 01
<u>Ti (ug/g)</u>					55	3		XRF	85AVA 01
12.6	1		ICPES	83SCH 03	56	2	11	ICPES	82JON 01
68	9		ITNA	77NAD 02	56.8	7.3		ICPES	85LYO 01
89	8		COLOR	84GLA 11	57	2	11	ICPES	82JON 01
<u>Tl (ng/g)</u>					58			OES	75JON 01
					58			OES	75JON 06
20		11	ASV	84LIE 01	58	1.5	11	AA	84SUZ 03
24		11	ASV	84LIE 01	58	4	6	AF	83MCC 02
					58.03	3.33		NAA	76GUZ 01
<u>U (ng/g)</u>					58.9		11	AA	79HOE 02
20	20		RTNA	80SLO 01	59			ICPES	81GOO 01
50.2	2.3		RTNA	78DER 01	59			OES	75JON 11
54			DNA	84GLA 02	59	2	11	ICPES	82JON 01
60	120	R*	DNA	81GLA 03	59	3	11	ICPES	82JON 01
63	3	35	DNA	80GLA 04	59	3		AA	83RAP 01
63	4		DNA	86GAU 01	59.5	2.2		ICPES	83SCH 03
63	6		DNA	85GAU 04	60			OES	75JON 02
					60	2	6	AF	83MCC 02
					60	3	11	ICPES	82JON 01
					61		6	AA	72SIN 01
					61	3		ICPES	85WHI 02

TABLE 1573-2: INDIVIDUAL DATA FOR NBS SRM 1573 (cont.)

Conc	Uncer	Com	Method	Reference	
<u>Zn (ug/g) cont.</u>					
62	3	11	ICPES	82JON	01
62	4		ITNA	77NAD	02
62	4.6		ITNA	79REN	03
62.5			AA	81ARA	01
62.5	1.2		CPAA	85CAN	01
62.9		6	POL	72SIN	01
62.9	1.7	6	POL	72SIN	01
63	2.5	11	AA	75ISA	01
63.5	1.5	11	ICPES	81MUN	01
64	3	11	ICPES	82JON	01
65			OES	75JON	07
65			OES	75JON	05
65	3.25	11	AA	75ISA	01
65	7		ICPES	80SCH	05
65	7	D	ICPES	80SCH	08
66	2.2	11	AA	84SUZ	03
66.4	8		CPXRF	84BIS	01
66.6	4.6	11	ICPES	81MUN	01
68		11	AA	79HOE	02
68			FAA	83ATS	01
68.5	1.7		ITNA	86KRA	01
71	2		ICPES	83SCH	04
72.8	2	6	EXRF	79MAT	01
73	3		ICPES	79HER	01
75			OES	75JON	08
78	2.1	6	EXRF	79MAT	01
86			OES	75JON	04
124			EXRF	81PAR	01

TABLE 1575-1: COMPILED DATA FOR NBS SRM 1575 PINE NEEDLES (revised 3/1/86)

ELE	UNITS	NBS		CONSENSUS		MEDIAN	RANGE		AA		NAA		ICPES		OTHER METHODS	
		Mean \pm SD	(n)	Mean \pm SD	(n)		Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n) Method
Ag	ng/g	---	---	150	(1)	---	---	---	---	---	150	(1)	---	---	---	---
Al	ug/g	545 \pm 30	(24)	510 \pm 60	(24)	521	399 - 620	(3)	558 \pm 26	(3)	600 \pm 80	(6)	500 \pm 60	(7)	658	(2) XRF
Al	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	452.7	(2) COLOR
As	ng/g	210 \pm 40	(22)	207 \pm 18	(22)	200	180 - 240	(11)	205 \pm 17	(11)	212 \pm 20	(9)	193	(1)	---	210 (1) COLOR
Au	ng/g	---	(2)	0.6	(2)	---	0.3 - 0.9	---	---	---	0.6	(2)	---	---	---	---
B	ug/g	---	(18)	17 \pm 2	(18)	17	13 - 20	---	---	---	16	(1)	16 \pm 2	(4)	17 \pm 3	(10) OES
B	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	17.4 \pm 1.5	(3) TCGS
Ba	ug/g	---	(8)	7.2 \pm 0.8	(8)	7	6 - 8.4	---	---	---	7.25	(2)	7.45	(2)	7.0 \pm 0.8	(4) OES
Br	ug/g	9	(12)	6.9 \pm 0.9	(12)	6.8	5.4 - 8.6	---	---	---	7.0 \pm 0.8	(10)	---	---	6.24	(2) XRF
C	%	---	(3)	50.49 \pm 0.18	(3)	50.4	50.37 - 50.7	---	---	---	---	---	---	---	50.49 \pm 0.18	(3) CB
Ca	ug/g	4100 \pm 200	(28)	4200 \pm 360	(28)	4182	3600 - 5000	(1)	4660	(1)	4290 \pm 180	(4)	4130 \pm 230	(11)	3765	(2) XRF
Ca	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	4300 \pm 600	(9) OES
Cd	ng/g	< 500	(20)	220 \pm 60	(20)	200	140 - 340	(9)	240 \pm 60	(9)	193 \pm 13	(3)	210 \pm 70	(8)	4290	(1) NM
Ce	ng/g	400	(3)	210 \pm 50	(3)	---	150 - 258	---	---	---	210 \pm 50	(3)	---	---	---	---
Cl	ug/g	---	(5)	280 \pm 30	(5)	280	243 - 305	---	---	---	270 \pm 25	(4)	---	---	305	(1) XRF
Co	ng/g	100	(6)	122 \pm 14	(6)	110	110 - 140	(1)	110	(1)	128 \pm 13	(4)	110	(1)	---	---
Cr	ug/g	2.6 \pm 0.2	(16)	2.6 \pm 0.2	(16)	2.58	2.2 - 3.1	(6)	2.5 \pm 0.2	(6)	2.57 \pm 0.15	(3)	2.5 \pm 0.4	(7)	2.58	(1) XRF
Cs	ng/g	---	(6)	110 \pm 10	(6)	104	101 - 126	---	---	---	110 \pm 10	(6)	---	---	---	---
Cu	ug/g	3.0 \pm 0.3	(34)	3.0 \pm 0.4	(34)	3	2 - 4.5	(9)	3.3 \pm 0.3	(9)	2.9 \pm 0.4	(4)	2.7 \pm 0.3	(11)	3.06 \pm 0.10	(3) XRF
Cu	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	2.8	(1) FAE
Eu	ng/g	6	(3)	5.5 \pm 1.3	(3)	6	4 - 6.5	---	---	---	5.5 \pm 1.3	(3)	---	---	2.91 \pm 0.02	(3) COLOR
F	ug/g	---	(4)	2.8 \pm 0.7	(4)	2.5	2 - 3.7	---	---	---	---	---	---	---	5.9 \pm 2.2	(9) OES
F	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Fe	ug/g	200 \pm 10	(36)	185 \pm 26	(36)	188	118 - 254	(4)	196 \pm 13	(4)	203 \pm 40	(6)	189 \pm 22	(12)	3.7	(1) MS
Fe	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	192 \pm 4	(4) XRF
Gd	ng/g	---	(1)	28	(1)	---	---	---	---	---	28	(1)	---	---	181 \pm 12	(3) COLOR
H	%	---	(3)	6.48 \pm 0.08	(3)	6.5	6.39 - 6.54	---	---	---	---	---	---	---	6.5	(1) TCGS
H	%	---	(1)	4.4	(1)	---	---	---	---	---	---	---	---	---	---	---
Hf	ng/g	---	(2)	23	(2)	---	10 - 36	---	---	---	23	(2)	---	---	---	---
Hg	ng/g	150 \pm 50	(5)	144 \pm 16	(5)	147	121 - 160	(3)	146 \pm 12	(3)	140	(2)	---	---	---	---
I	ng/g	---	(2)	145	(2)	---	140 - 150	---	---	---	145	(2)	---	---	---	---
K	ug/g	3700 \pm 200	(20)	3670 \pm 310	(20)	3700	2700 - 5100	---	---	---	4100 \pm 700	(4)	3630 \pm 200	(9)	3700	(2) XRF
La	ng/g	200	(5)	160 \pm 40	(5)	141	130 - 210	---	---	---	160 \pm 40	(5)	---	---	---	3800 \pm 800
Li	ng/g	---	(1)	340	(1)	---	---	(1)	340	(1)	---	---	---	---	---	(7) OES
Lu	ng/g	---	(3)	1.6 \pm 0.6	(3)	1.3	1.2 - 2.2	---	---	---	1.6 \pm 0.6	(3)	---	---	---	---

TABLE 1575-1: COMPILED DATA FOR NBS SRM 1575 PINE NEEDLES (cont.)

ELE	UNITS	NBS		MEDIAN	RANGE	AA		NAA		ICPES		OTHER METHODS	
		Mean \pm SD	(n)			Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)	Method	Mean \pm SD (n) Method
Mg	ug/g	---	---	1200	900 - 1600	---	---	1340 \pm 150	(3)	1150 \pm 70	(11)	1320 \pm 230	(10) OES
Mn	ug/g	675 \pm 15	(34)	670	430 - 738	677 \pm 20	(4)	684 \pm 17	(4)	663 \pm 32	(13)	1070 \pm 750	(4) XRF
Mn	ug/g	---	---	---	---	---	---	---	---	---	---	---	673 (1) DCPEs
Mo	ug/g	---	---	0.13	0.1 - 0.2	---	---	0.1	(1)	0.16 \pm 0.05	(4)	2.3 \pm 1.0	(4) OES
N	%	1.2	(3)	1.2	1.11 - 1.3	---	---	---	---	---	---	1.16	(2) CB
Na	ug/g	---	(17)	37	18 - 105	---	---	46 \pm 18	(5)	40 \pm 37	(5)	59 \pm 36	(7) OES
Nd	ng/g	---	(2)	---	128 - 200	---	---	164	(2)	---	---	---	---
Ni	ug/g	3.5	(13)	2.31	2.2 - 3.3	3.3	(1)	2.25	(2)	2.30 \pm 0.08	(6)	2.50	(2) XRF
Ni	ug/g	---	---	---	---	---	---	---	---	---	---	---	2.63 (1) VOLT
P	ug/g	1200 \pm 200	(25)	1170	1000 - 1410	1255	(2)	---	---	1170 \pm 60	(13)	1145	(2) XRF
P	ug/g	---	---	---	---	---	---	---	---	---	---	---	2.9 (1) DCPEs
Pb	ug/g	10.8 \pm 0.5	(29)	10.8	9.6 - 11.9	10.8 \pm 0.4	(20)	---	---	11.3 \pm 1.8	(6)	8.6 \pm 1.5	(3) XRF
Pb	ug/g	---	---	---	---	---	---	---	---	---	---	---	1100 (1) CPAA
Pd	ng/g	---	---	---	---	---	---	< 2	---	---	---	---	10.6 (1) TOMS
Pr	ng/g	---	---	---	---	---	---	< 70	---	---	---	---	10.7 (2) ASV
Rb	ug/g	11.7 \pm 0.1	(6)	11	10.8 - 13.1	---	---	11.6 \pm 0.8	(4)	---	---	---	---
S	ug/g	---	(9)	1250	1200 - 1500	---	---	---	---	1400	(1)	1220 \pm 430	(4) XRF
Sb	ng/g	200	(12)	189	180 - 220	184 \pm 4	(3)	202 \pm 17	(9)	---	---	---	---
Sc	ng/g	30	(6)	39	27 - 53	---	---	41 \pm 8	(6)	---	---	---	---
Se	ng/g	---	(5)	44	43 - 53	---	---	49 \pm 4	(3)	---	---	---	43 (2) GC
Si	ug/g	---	(2)	---	248 - 1380	---	---	---	---	---	---	814	(2) XRF
Sm	ng/g	---	(3)	20	18 - 21	---	---	20 \pm 2	(3)	---	---	---	---
Sr	ug/g	4.8 \pm 0.2	(7)	4.9	4.45 - 5.5	---	---	5.4	(1)	4.82	(2)	4.98	(2) XRF
Sr	ug/g	---	---	---	---	---	---	---	---	---	---	---	5 (1) OES
Ta	ng/g	---	(1)	---	---	---	---	13	(1)	---	---	---	4.7 (1) AF
Tb	ng/g	---	(2)	---	2 - 60	---	---	31	(2)	---	---	---	---
Th	ng/g	37 \pm 3	(3)	35	34 - 50	---	---	40 \pm 10	(3)	---	---	---	---
Ti	ug/g	---	(1)	---	---	---	---	---	---	---	---	13.7	(1) XRF
Tl	ng/g	50	(5)	29	27 - 31	29	(1)	---	---	---	---	29.0 \pm 1.8	(4) ASV
U	ng/g	20 \pm 4	(6)	15	13 - 20	---	---	16 \pm 2	(6)	---	---	---	---
V	ng/g	---	(8)	370	248 - 470	---	---	380 \pm 90	(6)	390	(2)	---	---
W	ng/g	---	(1)	---	---	---	---	50	(1)	---	---	---	---
Yb	ng/g	---	(2)	---	9 - 26	---	---	17.5	(2)	---	---	---	---
Zn	ug/g	---	(33)	66	51 - 87	65	(1)	58 \pm 6	(4)	68 \pm 8	(15)	60 \pm 7	(4) XRF
Zn	ug/g	---	---	---	---	---	---	---	---	---	---	---	74 \pm 10 (8) OES
													71 (1) DCPEs

TABLE 1575-2: INDIVIDUAL DATA FOR NBS SRM 1575 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ag (ng/g)</u>					<u>As (ng/g) cont.</u>				
150	50		RTNA	80SLO 01	210	10		COLOR	77BUR 01
					210	20		HAA	84NAR 01
					215	6		HAA	81UTH 01
					220	20	7	RTNA	80GAL 02
					220	40		ITNA	82GLA 02
					220	60		HAA	85NAR 03
					230			HAA	81ARA 01
					230	20		FAA	80DUP 01
					240	20	7	RTNA	77GIL 03
					240	20	7	RTNA	80GAL 02
					<u>Au (ng/g)</u>				
					0.3	0.08		ITNA	79REN 03
					0.9	0.1		RTNA	80SLO 01
					<u>B (ug/g)</u>				
					13			OES	75JON 08
					13			OES	75JON 09
					13.3	0.7		ICPES	79HER 01
					15			OES	75JON 02
					15			OES	75JON 05
					16	4		ITNA	82SCH 05
					16.1	0.1		TCGS	82GLA 02
					17			OES	75JON 01
					17	1	35	TCGS	81GLA 04
					17.2	1.4	11	ICPES	81MUN 01
					17.6	0.7	11	ICPES	81MUN 01
					18			ICPES	81GOO 01
					18			OES	75JON 07
					19			OES	75JON 06
					19	1		TCGS	84GLA 11
					20			OES	75JON 04
					20			OES	75JON 03
					20			OES	75JON 11
					<u>Ba (ug/g)</u>				
					3			OES	75JON 03
					6			OES	75JON 05
					6.1	0.4		ITNA	77NAD 02
					7			OES	75JON 11
					7			OES	75JON 04
					7.1			ICPES	84NAD 01
					7.8	4		ICPES	85WHI 02
					8			OES	75JON 01
					8.4	2.5		ITNA	85GAU 04
<u>Al (ug/g)</u>									
255			OES	75JON 11					
287			OES	75JON 02					
399			ICPES	81GOO 01					
405			OES	75JON 06					
439	18	11	ICPES	81MUN 01					
443.9	20.4	6	COLOR	85BAR 01					
449			OES	75JON 07					
461.5	16.6	6	COLOR	85BAR 01					
465			OES	75JON 05					
473			OES	75JON 08					
483			OES	75JON 04					
495			ICPES	84NAD 01					
498	15	11	ICPES	81MUN 01					
521			OES	75JON 03					
526	17	11	ICPES	82JON 01					
529	6		ITNA	84GLA 11					
532	20		AA	83RAP 01					
553	12		ITNA	86KRA 02					
558			FAA	86KRA 02					
560	10		ICPES	83SCH 04					
565	44		ITNA	77NAD 02					
575.1	1		ICPES	84FOG 01					
582	47		CPXRF	80KIR 01					
585			AA	81ARA 01					
590	50		ITNA	85GAU 04					
620		35	ITNA	81GLA 03					
734			CPXRF	84KAU 01					
750	200		ITNA	80SLO 01					
1243			OES	75JON 01					
<u>As (ng/g)</u>									
150	50		RTNA	80SLO 01					
154	5	7	FAA	82HOE 02					
180	15	7	FAA	82HOE 02					
181	3		RTNA	79HOE 01					
187	6	7	FAA	82HOE 02					
190	10	11	HAA	82JON 01					
190	30	11	HAA	82JON 01					
193			ICPES	84MIA 01					
200			FAA	84XIA 01					
200	20	7	RTNA	80GAL 02					
200	20	7	RTNA	77GIL 03					
200	30		ITNA	77NAD 02					
200	50		AA	83RAP 01					
205	22		ITNA	85GAU 04					

TABLE 1575-2: INDIVIDUAL DATA FOR NBS SRM 1575 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Br (ug/g)</u>					<u>Ca (ug/g) cont.</u>				
5.4	1.2		CPXRF	80KIR 01	4800			OES	75JON 04
6.1	0.09		ITNA	79REN 03	4900			OES	75JON 01
6.25	0.2		ITNA	80HOE 01	5000			ICPES	81GOO 01
6.4	0.8	5	IENA	79GLA 02	5300			OES	75JON 08
6.43	0.08		ITNA	77NAD 02	13100			EXRF	81PAR 01
6.8	0.5	5	IENA	79GLA 02					
6.9	0.2		ITNA	85GAU 04	<u>Cd (ng/g)</u>				
7.08			CPXRF	84KAU 01					
7.4	0.3		ITNA	77STE 02	140	70	11	ICPES	82JON 01
7.6			ITNA	86GAU 01	150	20		ICPES	84FOG 01
8			ITNA	84GLA 02	160	90	11	ICPES	82JON 01
8.6			ITNA	84GLA 11	180	30		RTNA	80SLO 01
30			EXRF	81PAR 01	180	90	11	ICPES	82JON 01
<u>C (%)</u>					185	17		FAA	84GLA 11
50.37	0.16		CB	80SCH 02	193	10	7	RTNA	80GAL 02
50.4	1.5	35	CB	79GLA 04	193	30		AA	86GAU 01
50.7	0.9		CB	82GLA 02	200			FAA	80PRE 01
54	2	35	TCGS	79GLA 04	200	20		ICPES	83SCH 04
<u>Ca (ug/g)</u>					206	10		RTNA	77DER 01
3100	200		ITNA	80SLO 01	210			FAA	82PRE 01
3300			OES	75JON 07	220	30		FAA	84GLA 02
3600			ICPES	84NAD 01	250	10		FAA	80LEG 01
3700	500		CPXRF	80KIR 01	260	10		ICPES	79HER 01
3800			OES	75JON 02	300	40	D	FAA	80SCH 08
3800			OES	75JON 11	300	40		AA	80SCH 05
3800			OES	75JON 05	300	100	11	ICPES	82JON 01
3830			CPXRF	84KAU 01	300	200	11	ICPES	81MUN 01
3900			OES	75JON 09	310	30		FAA	81KNA 01
4000			OES	75JON 06	340	30		AA	83RAP 01
4000	30		ICPES	84FOG 01	<u>Ce (ng/g)</u>				
4000	100	11	ICPES	82JON 01	150	30		RTNA	80SLO 01
4070	120		ITNA	85GAU 04	220	50		ITNA	85GAU 04
4090	20	11	ICPES	82JON 01	258	27		RTNA	83TJI 01
4100	30	11	ICPES	82JON 01	<u>Cl (ug/g)</u>				
4110	30	11	ICPES	82JON 01	243	20		ITNA	77NAD 02
4182	67	11	ICPES	81MUN 01	260			ITNA	84GLA 11
4200	100		ICPES	85WHI 02	280	30		ITNA	80SLO 01
4290	40		NM	81YUZ 01	300	20		ITNA	85GAU 04
4290	60		ICPES	79HER 01	305			CPXRF	84KAU 01
4300			ITNA	84GLA 11	510	120		CPXRF	79REN 02
4300	600		ITNA	79REN 03	551	37		ITNA	77STE 02
4316	157	11	ICPES	81MUN 01					
4500	400		ICPES	85LYO 01					
4500	400		ITNA	77NAD 02					
4600			OES	75JON 03					
4660			AA	84GLA 02					

TABLE 1575-2: INDIVIDUAL DATA FOR NBS SRM 1575 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Eu (ng/g)</u>					<u>Fe (ug/g) cont.</u>				
4	1		RTNA	83TJI 01	209			AA	82WIL 04
6	2.6		ITNA	77GUZ 01	214.5	21.9		ICPES	85LYO 01
6.5	0.8		ITNA	77NAD 02	217	8	11	ICPES	81MUN 01
11.3	1.6		ITNA	85GAU 04	254			OES	75JON 05
					260			OES	75JON 04
<u>F (ug/g)</u>					280	50		ITNA	79REN 03
					595			AA	81ARA 01
2			COLOR	83JAC 01	790			EXRF	81PAR 01
2.5	0.3		ISE	83KNA 01	<u>Gd (ng/g)</u>				
2.9	0.8		ISE	84GLA 02	28	7		RTNA	83TJI 01
3.7	0.8		MS	77STE 02	<u>H (%)</u>				
<u>Fe (ug/g)</u>					<u>H2O- (%)</u>				
47			OES	75JON 09	6.39	0.07		CB	80SCH 02
100	10	11	ICPES	81MUN 01	6.5	0.1	35	TCGS	79GLA 04
106			OES	75JON 06	6.54	0.08		CB	82GLA 02
118			OES	75JON 02	<u>Hf (ng/g)</u>				
120			OES	75JON 03	10			RTNA	80SLO 01
142			OES	75JON 11	36	17		ITNA	85GAU 04
152			ICPES	84NAD 01	<u>Hg (ng/g)</u>				
152			ICPES	81GOO 01			D	GRAV	85NAR 03
156			OES	75JON 01	4.4			GRAV	84NAR 01
170	10		ITNA	79DAS 01	<u>I (ng/g)</u>				
170	10		RTNA	80SLO 01	<	200	L	PAA	77WIL 01
174	0.9	11	COLOR	82SCH 03	140	20		IENA	82SAT 01
174	6	11	COLOR	82SCH 03	150	50		RTNA	77STE 02
175	7	11	ICPES	82JON 01					
177	4	11	ICPES	82JON 01					
182			OES	75JON 08					
183	3		ICPES	79HER 01					
185		11	AA	79HOE 02					
185		11	AA	79HOE 02					
188	9		XRF	85AVA 01					
188	17		CPXRF	80KIR 01					
193			OES	75JON 07					
194	4	11	ICPES	82JON 01					
194	6	11	COLOR	82SCH 03					
194	10		ICPES	80SCH 05					
195			CPXRF	84KAU 01					
195	10	11	ICPES	82JON 01					
195	10	D	ICPES	80SCH 08					
195.7	5.4		ITNA	77GUZ 01					
196	7		ITNA	77NAD 02					
196	13		XRF	83PEL 01					
198	8		AF	81HOR 01					
204	10		ITNA	85GAU 04					
204	12		ICPES	81KNA 01					
207	0.8		ICPES	84FOG 01					
207	12		AA	83RAP 01					

TABLE 1575-2: INDIVIDUAL DATA FOR NBS SRM 1575 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>K (ug/g)</u>					<u>Mg (ug/g)</u>				
2700			OES	75JON 05	900			OES	75JON 09
3000			ICPES	84NAD 01	1000			ICPES	84NAD 01
3200			OES	75JON 09	1025			ICPES	81GOO 01
3300	100		ICPES	79HER 01	1070			CPXRF	84KAU 01
3400	200	11	ICPES	82JON 01	1100	100		ICPES	79HER 01
3500	500		CPXRF	80KIR 01	1140	19	11	ICPES	81MUN 01
3530	80	11	ICPES	82JON 01	1180	30	11	ICPES	82JON 01
3600			ICPES	79COO 01	1190	20	11	ICPES	82JON 01
3600	100		ITNA	77NAD 02	1191	38	11	ICPES	81MUN 01
3620	40	11	ICPES	82JON 01	1200			OES	75JON 06
3665	82	11	ICPES	81MUN 01	1200			OES	75JON 01
3700			OES	75JON 03	1200			OES	75JON 07
3700	200		ITNA	79REN 03	1200			OES	75JON 02
3794	143	11	ICPES	81MUN 01	1200	20	11	ICPES	82JON 01
3800			OES	75JON 04	1200	30	11	ICPES	82JON 01
3850	80	11	ICPES	82JON 01	1200	70		ICPES	85LYO 01
3900	200		ICPES	85WHI 02	1200	100		ICPES	85WHI 02
3910			CPXRF	84KAU 01	1200	200		ITNA	80SLO 01
4000			OES	75JON 01	1300			OES	75JON 03
4000	100		ITNA	80SLO 01	1330			ITNA	84GLA 11
4400			OES	75JON 02	1400			OES	75JON 08
5100			OES	75JON 06	1500			OES	75JON 11
5100			ITNA	84GLA 11	1500	200		ITNA	77NAD 02
5800			OES	75JON 11	1600			OES	75JON 05
6500			OES	75JON 07	1700			OES	75JON 04
9100			EXRF	81PAR 01	2200	600		CPXRF	80KIR 01
<u>La (ng/g)</u>					<u>Mn (ug/g)</u>				
130	20		RTNA	80SLO 01	174			ICPES	81GOO 01
140	10		ITNA	77NAD 02	430			OES	75JON 09
141	22		RTNA	83TJI 01	448			OES	75JON 01
190	13		ITNA	85GAU 04	567			OES	75JON 06
210	30		ITNA	79REN 03	570			OES	75JON 02
<u>Li (ng/g)</u>					580			OES	75JON 04
340	40		AA	85GAU 04	588			OES	75JON 03
<u>Lu (ng/g)</u>					602	59	11	ICPES	81MUN 01
1.2	0.2		RTNA	83TJI 01	610			ICPES	84NAD 01
1.3	0.3		RTNA	80SLO 01	652	14	11	ICPES	82JON 01
2.2	0.5		ITNA	85GAU 04	652	15	11	ICPES	82JON 01
					654	20		AA	77GUZ 01
					655	13	11	ICPES	82JON 01
					657	7	11	ICPES	82JON 01
					660	28		ITNA	77NAD 02
					668			OES	75JON 05
					668	20		AA	83RAP 01
					669	48		XRF	83PEL 01
					670	6		ICPES	79HER 01
					671	2		ICPES	83SCH 04
					673	10		DCPES	79REE 01

TABLE 1575-2: INDIVIDUAL DATA FOR NBS SRM 1575 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Mn (ug/g) cont.</u>					<u>Na (ug/g) cont.</u>				
673	10	D	DCPES	81REE 01	56			ITNA	84GLA 11
676	0.7		ICPES	84FOG 01	70			OES	75JON 11
677	12		VV	80SCH 05	71			ITNA	84GLA 02
677	12	D	ICPES	80SCH 08	78			OES	75JON 08
678	7		ICPES	81KNA 01	100			OES	75JON 01
685	15		ITNA	80SLO 01	100			OES	75JON 05
686			CPXRF	84KAU 01	105	16	11	ICPES	81MUN 01
686	53		ICPES	85LYO 01	190			OES	75JON 04
688		11	AA	79HOE 02	<u>Nd (ng/g)</u>				
690	20		ITNA	85GAU 04	128	53		RTNA	83TJI 01
693	6		ICPES	85WHI 02	200	100		RTNA	80SLO 01
698		11	AA	79HOE 02	<u>Ni (ug/g)</u>				
700	100		ITNA	79REN 03	2.07	0.07	11	ICPES	82JON 01
719	13	11	ICPES	81MUN 01	2.2	0.1	11	ICPES	82JON 01
727			XRF	80SUZ 02	2.2	0.2		ITNA	77NAD 02
738			OES	75JON 08	2.24	0.06	11	ICPES	82JON 01
885			OES	75JON 07	2.3			ICPES	85JON 01
2200			EXRF	81PAR 01	2.3	0.2		ICPES	79HER 01
<u>Mo (ug/g)</u>					2.3	0.2		RTNA	80SLO 01
0.1			RTNA	80SLO 01	2.31			CPXRF	84KAU 01
0.1	0.1	11	ICPES	82JON 01	2.39	0.09	11	ICPES	82JON 01
0.13	0.06	11	ICPES	82JON 01	2.4	0.5	11	ICPES	81MUN 01
0.2	0.1	11	ICPES	82JON 01	2.63			VOLT	81PIH 01
0.2	0.1	11	ICPES	82JON 01	2.7	1.1		CPXRF	80KIR 01
1.5			OES	75JON 11	2.9	0.1		DCPES	79REE 01
1.7			OES	75JON 01	2.9	0.1	D	DCPES	81REE 01
2.5			OES	75JON 07	3.3	0.07		AA	83RAP 01
3.6			OES	75JON 03	3.7	0.2		ICPES	84FOG 01
18.5			OES	75JON 02	4			FAA	82HOE 01
<u>N (%)</u>					<u>P (ug/g)</u>				
1.11	0.01		CB	80SCH 02	900			ICPES	84NAD 01
1.2	0.14		CB	82GLA 02	1000			OES	75JON 04
1.3	0.2	35	TCGS	79GLA 04	1000	300		CPXRF	80KIR 01
<u>Na (ug/g)</u>					1100			ICPES	79EDI 01
18			OES	75JON 06	1100			OES	75JON 09
18	4	11	ICPES	81MUN 01	1100			ICPES	81GOO 01
20			OES	75JON 03	1100			FAA	79EDI 01
23			ICPES	84NAD 01	1100	50		ICPES	84FOG 01
26			ICPES	81GOO 01	1100	100		CPAA	83MAS 02
26	4		ITNA	77NAD 02	1146	120	11	ICPES	81MUN 01
26	9		ICPES	85WHI 02	1155	41	11	ICPES	81MUN 01
30			OES	75JON 09	1170	40	11	ICPES	82JON 01
37	4		ITNA	85GAU 04	1170	50		ICPES	81QWE 01
40			ITNA	79REN 03	1180	10		ICPES	79HER 01

TABLE 1575-2: INDIVIDUAL DATA FOR NBS SRM 1575 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>P (ug/g) cont.</u>					<u>Pd (ng/g)</u>				
1190	20	11	ICPES	82JON 01					
1190	50	11	ICPES	82JON 01	<	2	L	RTNA	81BYR 01
1200			OES	75JON 05	<	2		RTNA	85BEM 01
1200	100		ICPES	85WHI 02					
1260	20	11	ICPES	82JON 01	<u>Pr (ng/g)</u>				
1290			CPXRF	84KAU 01					
1300			OES	75JON 06	<	70	L	RTNA	80SLO 01
1300			OES	75JON 08					
1300	100		ICPES	85LYO 01	<u>Rb (ug/g)</u>				
1400			OES	75JON 07					
1400			OES	75JON 11	10.8			CPXRF	84KAU 01
1410	80		FAA	84KUB 01	10.8	0.5		ITNA	85GAU 04
1600			OES	75JON 02	11	0.2		ITNA	77NAD 02
1800			OES	75JON 03	12.22	0.85		ITNA	77GUZ 01
2100			OES	75JON 01	12.5	3.9		ITNA	79REN 03
					13.1	2.6		CPXRF	80KIR 01
					35			EXRF	81PAR 01
<u>Pb (ug/g)</u>					<u>S (ug/g)</u>				
7.4	1.3		CPXRF	80KIR 01					
8	1		XRF	85AVA 01					
9.6	0.4	11	ICPES	82JON 01					
9.8			FAA	80PRE 01	580	140		CPXRF	79REN 02
9.8	0.3	11	ICPES	82JON 01	1200	250		CB	84GLA 11
10.2		6	FAA	84FUD 01	1220	70		CB	86GAU 01
10.3			CPXRF	84KAU 01	1240		D	CB	85JAC 01
10.4			ASV	82GAJ 01	1240	30	6	CB	84JAC 01
10.4			FAA	82PRE 01	1250	40		CB	86BOW 01
10.5		6	FAA	82KOI 01	1290			CPXRF	84KAU 01
10.5		6	FAA	81HIN 01	1290		D	CB	85JAC 01
10.6		6	FAA	84FUD 01	1290	50	6	CB	84JAC 01
10.6	0.3		AA	83RAP 01	1400	100		ICPES	85WHI 02
10.6	0.3		IDMS	83BRO 01	1490	40		WXRF	86BOW 01
10.7	2		AA	84KAN 01	1500	300		CPXRF	80KIR 01
10.8			FAA	83HOE 01					
10.8			AA	82WIL 04	<u>Sb (ng/g)</u>				
10.8	0.6		ICPES	84FOG 01					
10.8	0.6		FAA	80LEG 01	180	10		ITNA	77NAD 02
10.9	0.3		FAA	81KNA 01	180	14		HAA	79VIJ 01
10.93	0.91		ASV	80SZY 01	185	2		RTNA	79HOE 01
11		6	FAA	82KOI 01	185	60		AA	83RAP 01
11		6	FAA	81HIN 01	187	7		HAA	78KUB 02
11		11	FAA	79HOE 02	189	17		ITNA	85GAU 04
11	0.6		FAA	79DAB 02	190	10		RTNA	80SLO 01
11	1		ICPES	79HER 01	198	3		RTNA	80KOS 02
11.1	0.3		AA	80SCH 05	220	10	7	RTNA	77GIL 03
11.1	0.3	D	FAA	80SCH 03	220	10	7	RTNA	80GAL 02
11.2		11	FAA	79HOE 02	220	20	7	RTNA	77GIL 03
11.2			FAA	82HOE 01	220	20	7	RTNA	80GAL 02
11.2	1.1		HAA	82WEI 01	1140	440		ITNA	79REN 02
11.9	1.1	11	ICPES	81MUN 01					
13.9	1.2		FAA	82WEI 01					
14.6	3.4	11	ICPES	81MUN 01					
33			EXRF	81PAR 01					

TABLE 1575-2: INDIVIDUAL DATA FOR NBS SRM 1575 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Sc (ng/g)</u>					<u>Th (ng/g)</u>				
27	4		ITNA	77GUZ 01	34	1		ITNA	77NAD 02
38.7	0.6		ITNA	86GAU 01	35	5		RTNA	80SLO 01
39	2		ITNA	84GLA 11	50	12		ITNA	85GAU 04
42	2		ITNA	77NAD 02	<u>Ti (ug/g)</u>				
45	6		ITNA	85GAU 04	13.7			CPXRF	84KAU 01
53	8		ITNA	79REN 03	<u>Tl (ng/g)</u>				
130			RTNA	80SLO 01	27		11	ASV	84LIE 01
<u>Se (ng/g)</u>					28		11	ASV	84LIE 01
43	1	11	GC	81UCH 02	29		11	FAA	84LIE 01
43	1	11	GC	81UCH 02	30		11	ASV	84LIE 01
44	8		ITNA	77NAD 02	31		11	ASV	84LIE 01
50	10		RTNA	80KNA 01	<u>U (ng/g)</u>				
53	10	9	ITNA	80WAN 01	13	2		RTNA	80SLO 01
96	16		RTNA	82POL 01	15			DNA	84GLA 02
<u>Si (ug/g)</u>					15	0.5		RTNA	78DER 01
248	36		CPXRF	80KIR 01	18	2		DNA	86GAU 01
1380			CPXRF	84KAU 01	18	6	35	DNA	80GLA 04
<u>Sm (ng/g)</u>					20	4		DNA	85GAU 04
18	1		RTNA	83TJI 01	20	48	R	DNA	81GLA 03
20	2		RTNA	80SLO 01	<u>V (ng/g)</u>				
21	2		ITNA	85GAU 04	99	14	11	RTNA	82HEY 02
130	120		ITNA	79REN 03	248	6	11	RTNA	82HEY 02
<u>Sr (ug/g)</u>					346	18		RTNA	78BYR 01
4.45			CPXRF	84KAU 01	347	27	11	RTNA	82HEY 02
4.7	0.2		AF	81HOR 01	370	90	11	ICPES	82JON 01
4.75	0.1		ICPES	84FOG 01	410	60	11	ICPES	82JON 01
4.9	0.1		ICPES	79HER 01	450			ITNA	85GAU 04
5			OES	75JON 03	453	61		ITNA	82HEY 02
5.4			IENA	85GAU 04	470	80		ITNA	77NAD 02
5.5	0.57		CPXRF	80KIR 01	<u>W (ng/g)</u>				
10			OES	75JON 04	50	10		RTNA	80SLO 01
20			OES	75JON 01	<u>Yb (ng/g)</u>				
<u>Ta (ng/g)</u>					9	1		RTNA	83TJI 01
13	4		ITNA	85GAU 04	26	8		ITNA	85GAU 04
1740	270		ITNA	79REN 03	<u>Tb (ng/g)</u>				
<u>Tb (ng/g)</u>					2	1		RTNA	83TJI 01
2	1		RTNA	83TJI 01	60	10		RTNA	80SLO 01
60	10		RTNA	80SLO 01					

TABLE 1575-2: INDIVIDUAL DATA FOR NBS SRM 1575 (cont.)

Conc	Uncer	Com	Method	Reference
<u>Zn (ug/g)</u>				
5			OES	75JON 09
51	9		CPXRF	79REN 02
52	1		ITNA	77NAD 02
53.5	2		RTNA	80SLO 01
56			ICPES	84NAD 01
57			OES	75JON 11
59.2			CPXRF	84KAU 01
60	3	11	ICPES	82JON 01
60.3	1.3		RTNA	77DER 01
61	4	11	ICPES	82JON 01
63	3	11	ICPES	82JON 01
64	4	11	ICPES	82JON 01
64	7		ICPES	79HER 01
65			AA	81ARA 01
65	4	11	ICPES	82JON 01
65	4.6		XRF	83PEL 01
65	6		ITNA	79REN 03
66			OES	75JON 06
67			XRF	80SUZ 02
68			OES	75JON 08
68	5	11	ICPES	82JON 01
69	8.8		ICPES	85LYO 01
71	1		DCPES	79REE 01
71	1	D	DCPES	81REE 01
71	10	11	ICPES	82JON 01
72			OES	75JON 02
72	13		ICPES	85WHI 02
74			OES	75JON 03
74	9	11	ICPES	82JON 01
76	2		ICPES	83SCH 04
78			ICPES	81GOO 01
82			OES	75JON 05
85			OES	75JON 07
86	21	11	ICPES	81MUN 01
87			OES	75JON 01
99	10	D	ICPES	80SCH 08
99	10		ICPES	80SCH 05
110	12		CPXRF	80KIR 01
111	39	11	ICPES	81MUN 01
141			OES	75JON 04

TABLE 1577-1: COMPILED DATA FOR NBS SRM 1577 BOVINE LIVER (revised 3/1/86)

ELE	UNITS	NBS Mean ± SD	CONSENSUS Mean ± SD (n)	MEDIAN	RANGE	AA		NAA		ICPES		XRF		OTHER METHODS		
						Mean ± SD (n)	Mean ± SD (n)	Mean ± SD (n)	Mean ± SD (n)	Mean ± SD (n)	Mean ± SD (n)	Method	Mean (n) Method			
Ag	ng/g	60	62 ± 13 (15)	65	40 - 100	66	(2)	66 ± 19 (14)	---	---	---	---	65 (1) SSMS	---		
Al	ug/g	---	16 ± 14 (23)	8.2	0.7 - 45.6	---	---	19 ± 15 (15)	---	12 ± 12 (5)	---	---	1.44 (1) HPLC	3.6 (1) SSMS	---	
As	ng/g	55 ± 5	55 ± 6 (53)	54	40 - 70	51 ± 5 (13)	(13)	55 ± 6 (34)	(1)	50	(1)	---	61.5 (2) ASV	54 (1) FAE	---	
As	ng/g	---	---	---	---	---	---	---	---	---	---	---	---	100 (1) GCMES	---	
Au	ng/g	---	2.8 ± 3.0 (7)	1.7	0.058 - 7	---	---	2.8 ± 3.0 (7)	(7)	---	---	---	---	---	---	---
B	ug/g	---	2.9 ± 0.8 (4)	2.34	2.24 - 4	---	---	---	---	4	(1)	---	---	3.2 (1) TCGS	2.29 (2) AE+AF	---
Ba	ug/g	---	0.94 ± 1.1 (7)	0.22	0.12 - 2.92	---	---	1.3 ± 1.3 (4)	(4)	0.68	(2)	---	0.15 (1) SSMS	---	---	---
Be	ng/g	17	4 (2)	---	3 - 5	5	(1)	---	(1)	3.0	(1)	---	---	---	---	---
Bi	ng/g	---	150 (1)	---	---	---	---	---	---	---	---	---	---	---	150 (1) AF	---
Br	ug/g	---	9.1 ± 0.9 (44)	9	7.35 - 11.1	---	---	9.1 ± 0.9 (30)	(30)	---	---	9.3 ± 0.9 (13)	---	---	---	---
C	%	---	50.6 ± 1.1 (4)	49.87	49.6 - 52	---	---	---	---	---	---	---	49.74 (2) CB	51.5 (2) TCGS	---	---
Ca	ug/g	124 ± 6	122 ± 14 (57)	123	87 - 151	118 ± 12 (12)	(12)	122 ± 14 (14)	(14)	126 ± 10 (11)	(11)	123 ± 28	(1) FAE	117 (2) DCPES	---	---
Ca	ug/g	---	---	---	---	---	---	---	---	---	---	---	108 (1) CPAA	128 (2) SSMS	---	---
Cd	ng/g	270 ± 40	281 ± 21 (111)	283	230 - 337	281 ± 21 (55)	(55)	284 ± 18 (24)	(24)	320 ± 40 (9)	(9)	---	258 ± 30 (10) ASV	270 (1) TCGS	---	---
Cd	ng/g	---	---	---	---	---	---	---	---	---	---	---	290 ± 30 (3) AF	253 (1) AE+AF	---	---
Cd	ng/g	---	---	---	---	---	---	---	---	---	---	---	300 (1) VOLT	280 (1) CPAA	---	---
Cd	ng/g	---	---	---	---	---	---	---	---	---	---	---	390 (2) DCPES	240 (2) SSMS	---	---
Ce	ng/g	---	20 ± 4 (5)	21.5	13 - 25	---	---	22 ± 3 (4)	(4)	---	---	---	---	---	---	---
Cl	ug/g	2700	2680 ± 140 (31)	2685	2410 - 3000	---	---	2680 ± 120 (22)	(22)	---	---	2760 ± 330 (4)	---	3000 (1) TCGS	---	---
Co	ng/g	180	230 ± 40 (68)	233	160 - 310	220 ± 39 (9)	(9)	229 ± 36 (46)	(46)	3	(1)	---	310 (2) 14NAA	245 (2) CHEML	---	---
Co	ng/g	---	---	---	---	---	---	---	---	---	---	---	160 (1) ASV	225 (1) COLOR	---	---
Co	ng/g	---	---	---	---	---	---	---	---	---	---	---	162 (1) GC	250 (2) SSMS	---	---
Cr	ng/g	88 ± 12	116 ± 52 (49)	123	22 - 280	94 ± 50 (9)	(9)	125 ± 50 (30)	(30)	62 ± 36 (3)	(3)	180	(1) DCPES	35 (1) GC	---	---
Cr	ng/g	---	17 ± 7 (19)	16	9 - 35	---	---	16 ± 6 (16)	(16)	---	---	---	---	---	---	---
Cu	ug/g	193 ± 10	190 ± 9 (164)	190	161 - 216	192 ± 7 (46)	(46)	190 ± 8 (47)	(47)	190 ± 9 (21)	(21)	187 ± 12 (24)	(1) AE+AF	196 (2) POL	---	---
Cu	ug/g	---	---	---	---	---	---	---	---	---	---	---	200 ± 11 (5) ASV	182 (2) SSMS	---	---
Cu	ug/g	---	---	---	---	---	---	---	---	---	---	---	187 (2) DCPES	198 (2) CPAA	---	---
Cu	ug/g	---	---	---	---	---	---	---	---	197 ± 8 (3)	(3)	---	HPLC	185 (1) FAE	---	---
Dy	ng/g	---	2.9 (2)	---	2.4 - 3.4	---	---	2.9 (2)	(2)	---	---	---	---	---	---	---
Er	ng/g	---	0.5 (1)	---	---	---	---	0.5 (1)	(1)	---	---	---	---	---	---	---
Eu	ng/g	---	0.33 ± 0.06 (5)	0.35	0.235 - 0.400	---	---	0.33 ± 0.06 (5)	(5)	---	---	---	---	---	---	---
F	ng/g	---	80 (2)	---	40 - 120	---	---	---	---	---	---	---	---	---	---	---
Fe	ug/g	268 ± 8	265 ± 18 (135)	265	205 - 315	265 ± 17 (28)	(28)	267 ± 15 (41)	(41)	261 ± 12 (21)	(21)	263 ± 19 (22)	(1) OES	236 (2) 14NAA	---	---
Fe	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	275 (2) SSMS	270 (1) COLOR	---
Fe	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	275 (2) HPLC	265 (1) GC	---
Fe	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	266 (2) DCPES	266 (2) FAE	---
Fe	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	280 (2) CPAA	---	---

TABLE 1577-1: COMPILED DATA FOR NBS SRM 1577 BOVINE LIVER (cont.)

ELE	UNITS	NBS Mean \pm SD	CONSENSUS Mean \pm SD (n)	MEDIAN	RANGE	AA		NAA		ICPES		XRF		OTHER METHODS	
						Mean \pm SD (n)	Mean \pm SD (n)	Mean \pm SD (n)	Mean \pm SD (n)	Mean \pm SD (n)	Mean \pm SD (n)	Mean \pm SD (n)	Mean \pm SD (n)	Method	(n) Method
Ga	ng/g	---	4 (1)	---	---	---	---	4 (1)	---	---	---	---	---	---	---
Gd	ng/g	---	2.1 (2)	---	1.8 - 2.4	---	---	2.1 (2)	---	---	---	---	---	---	---
Ge	ng/g	---	< 400	---	---	---	---	---	---	---	---	---	---	---	---
H	%	---	6.97 \pm 0.16 (3)	7	6.8 - 7.12	---	---	---	---	---	---	---	---	---	---
Hf	ng/g	---	4.15 (2)	---	1 - 7.3	---	---	4.15 (2)	---	---	---	---	---	---	---
Hg	ng/g	16 \pm 2	16.4 \pm 1.6 (43)	16	13.7 - 20	16.3 \pm 1.7 (18)	16.2 \pm 1.0 (22)	16.2 \pm 1.0 (22)	---	---	---	---	---	---	---
Ho	ng/g	---	0.25 \pm 0.05 (3)	0.25	0.2 - 0.3	---	0.25 \pm 0.05 (3)	---	---	---	---	---	---	---	---
I	ng/g	180	234 \pm 31 (15)	237	180 - 280	---	230 \pm 30 (14)	---	---	---	---	---	---	---	---
In	ng/g	50	0.07 (2)	---	0.05 - 0.09	---	0.07 (2)	---	---	---	---	---	---	---	---
K	%	0.97 \pm 0.0	0.98 \pm 0.06 (62)	0.9695	0.821 - 1.13	0.99 \pm 0.02 (8)	0.98 \pm 0.06 (25)	0.99 \pm 0.06 (5)	---	---	---	---	---	---	---
K	%	---	---	---	---	---	---	---	---	---	---	---	---	---	---
La	ng/g	---	16 \pm 4 (10)	17	10 - 24.5	---	16 \pm 4 (10)	---	---	---	---	---	---	---	---
Li	ng/g	---	164 (1)	---	---	164 (1)	---	---	---	---	---	---	---	---	---
Lu	ng/g	---	0.039 (2)	---	0.039 - 0.039	---	0.039 (2)	---	---	---	---	---	---	---	---
Mg	ug/g	604 \pm 9	608 \pm 41 (50)	602	516 - 700	589 \pm 17 (15)	630 \pm 50 (13)	610 \pm 40 (12)	---	---	---	---	---	---	---
Mg	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mn	ug/g	10.3 \pm 1.0	10.2 \pm 0.7 (134)	10.2	8.4 - 12	10.4 \pm 0.6 (42)	10.2 \pm 0.5 (39)	10.2 \pm 0.6 (20)	---	---	---	---	---	---	---
Mn	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mn	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mo	ug/g	3.4	3.2 \pm 0.4 (58)	3.23	2.3 - 4.1	2.8 \pm 0.8 (3)	3.3 \pm 0.3 (36)	3.0 \pm 0.7 (5)	---	---	---	---	---	---	---
Mo	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mo	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---
N	%	10.6 \pm 0.6	10.5 \pm 0.2 (5)	10.42	10.35 - 10.82	---	---	---	---	---	---	---	---	---	---
N	%	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Na	ug/g	2430 \pm 130	2395 \pm 200 (57)	2400	1940 - 3010	2440 \pm 90 (9)	2390 \pm 200 (32)	2550 \pm 310 (5)	---	---	---	---	---	---	---
Na	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Nd	ng/g	---	14 \pm 4 (3)	14.5	9 - 18	---	14 \pm 4 (3)	---	---	---	---	---	---	---	---
Ni	ng/g	---	160 \pm 80 (12)	180	50 - 270	92 \pm 56 (3)	190 \pm 90 (4)	50 (1)	---	---	---	---	---	---	---
Ni	ng/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---
P	%	1.1	1.13 \pm 0.12 (22)	1.14	0.905 - 1.35	1.07 (2)	1.2 \pm 0.2 (3)	1.11 \pm 0.10 (12)	---	---	---	---	---	---	---
Pb	ng/g	340 \pm 80	350 \pm 50 (69)	350	240 - 490	340 \pm 40 (40)	---	410 \pm 80 (5)	---	---	---	---	---	---	---
Pb	ng/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Pb	ng/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Pb	ng/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Pr	ng/g	---	4.2 \pm 0.3 (3)	4	4 - 4.6	---	4.2 \pm 0.3 (3)	---	---	---	---	---	---	---	---
Pt	ug/g	---	70 (1)	---	---	---	70 (1)	---	---	---	---	---	---	---	---
Rb	ug/g	18.3 \pm 1.0	18.4 \pm 1.2 (58)	18.7	15.1 - 21.2	20 (2)	18.3 \pm 0.8 (35)	---	---	---	---	---	---	---	---
Rb	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---

TABLE 1577-1: COMPILED DATA FOR HBS SRM 1577 BOVINE LIVER (cont.)

ELE	UNITS	HBS Mean \pm SD	CONSENSUS Mean \pm SD (n)	MEDIAN	RANGE	AA		MAA		ICPES		XRF		OTHER METHODS	
						Mean \pm SD (n)	Mean \pm SD (n)	Mean \pm SD (n)	Mean \pm SD (n)	Mean \pm SD (n)	Mean \pm SD (n)	Mean \pm SD (n)	Mean \pm SD (n)	Method	(n) Method
S	ug/g	---	7900 \pm 1000 (11)	7440	6300 - 9500	---	---	---	---	8020 \pm 1110 (3)	---	8600 \pm 900 (4)	6300	(1) NM	8150 (1) CB
S	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	7200 (2) TCOS
Sb	ng/g	5	9.6 \pm 4.7 (21)	10	4 - 26	5	(1)	9.4 \pm 4.4 (19)	---	---	---	---	---	---	---
Sc	ng/g	---	0.9 \pm 0.3 (8)	1	0.4 - 1.2	---	---	1.08 \pm 0.08 (6)	---	---	---	---	---	---	---
Se	ug/g	1.1 \pm 0.1	1.09 \pm 0.08 (172)	1.1	0.9 - 1.3	1.08 \pm 0.08 (44)	---	1.10 \pm 0.07 (81)	---	1.02 \pm 0.14 (7)	---	1.12 \pm 0.19 (10)	1.11	(2) SMS	0.98 (1) GCMES
Se	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	1.14 (2) COLOR
Se	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	0.98 (1) DCPES
Se	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	1.07 (1) GC-MS
Se	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Se(VI)	ug/g	---	0.305 (2)	---	0.3 - 0.31	---	---	---	---	---	---	---	---	---	0.31 (1) COLOR
Se(VI)	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	0.3 (1) GC
Si	ug/g	17	17.5 \pm 1.3 (3)	16.79	16.7 - 19	---	---	16.7 (2)	---	---	---	---	---	---	19 (1) SMS
Sm	ng/g	---	1.6 \pm 0.3 (7)	1.6	1 - 2	---	---	1.6 \pm 0.3 (7)	---	---	---	---	---	---	---
Sn	ng/g	---	18 \pm 5 (4)	20	10 - 21	10	(1)	20.3 \pm 0.6 (3)	---	---	---	---	---	---	---
Sr	ng/g	140	170 \pm 70 (5)	160	100 - 300	160	(1)	---	---	230 (2)	---	---	---	---	100 (1) SMS
Ta	ng/g	---	3 (1)	---	---	---	---	3 (1)	---	---	---	---	---	---	---
Tb	ng/g	---	0.8 \pm 1.0 (3)	0.18	0.17 - 2	---	---	0.8 \pm 1.0 (3)	---	---	---	---	---	---	---
Te	ng/g	---	90 (1)	---	---	---	---	90 (1)	---	---	---	---	---	---	---
Th	ng/g	---	4.9 (2)	---	3 - 6.8	---	---	4.9 (2)	---	---	---	---	---	---	---
Ti	ug/g	---	2.7 \pm 1.5 (6)	2	0.7 - 4.7	---	---	---	---	1.7 (1)	---	---	---	---	---
Ti	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Ti	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Tl	ng/g	50	2 (1)	---	---	---	---	---	---	---	---	---	---	---	---
Tm	ng/g	---	0.12 (2)	---	0.1 - 0.15	---	---	0.12 (2)	---	---	---	---	---	---	---
U	ng/g	0.8	1.0 (2)	---	0.99 - 1.0	---	---	1.0 (2)	---	---	---	---	---	---	---
V	ng/g	---	58 \pm 8 (13)	60	33 - 66.2	55	(1)	61 \pm 3 (8)	---	75 (2)	---	---	---	---	---
W	ng/g	---	8 \pm 5 (5)	5	3.8 - 15	---	---	9 \pm 5 (4)	---	---	---	---	---	---	---
Y	ug/g	---	< 1	---	---	---	---	---	---	---	---	< 1	---	---	---
Yb	ug/g	---	0.35 \pm 0.11 (3)	0.2850	0.28 - 0.48	---	---	0.35 \pm 0.11 (3)	---	---	---	---	---	---	---
Zn	ug/g	130 \pm 13	130 \pm 7 (188)	130	112 - 150	129 \pm 7 (40)	---	129 \pm 6 (67)	---	132 \pm 6 (24)	---	133 \pm 10 (22)	130	(1) OES	132 (1) GC
Zn	ug/g	---	---	---	---	---	---	---	---	---	---	---	136 \pm 6 (4)	DCPES	134 (2) FAE
Zn	ug/g	---	---	---	---	---	---	---	---	---	---	---	129 \pm 10 (3)	ASV	132 (2) AF
Zn	ug/g	---	---	---	---	---	---	---	---	---	---	---	120 \pm 3 (3)	POL	136 (1) HPLC
Zn	ug/g	---	---	---	---	---	---	---	---	---	---	---	134.3 \pm 0.6 (3)	AEAF	78 (1) 14NAA
Zn	ug/g	---	---	---	---	---	---	---	---	---	---	---	137 \pm 10 (3)	SSMS	138 (2) CPAA
Zr	ug/g	---	2.3 \pm 1.8 (4)	1.6	0.09 - 4	---	---	---	---	---	---	---	4	(1) CPAA	1.6 (1) SSMS

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ag (ng/g)</u>					<u>Al (ug/g) cont.</u>				
<	130	L	RTNA	76GAU 01	34.4	1.4		RTNA	80WOI 01
5		17	UU	74MAS 01	34.6			ICPES	84NAD 01
40	8		RTNA	79WAR 02	37	6		ITNA	77ZIK 01
49	16		IENA	86CHI 01	42	13		ITNA	77HAM 01
51	11		RTNA	77LIE 01	45.6			ITNA	73NAD 01
51	11		RTNA	75LIE 01	65			ITNA	78CAP 01
53	17		ITNA	86CHI 01					
58	3		ITNA	86GRE 01	<u>As (ng/g)</u>				
60			ITNA	77OSB 01	23	12		HAA	82TAM 01
60	1		FAA	75PIC 01	30	15		IENA	78WAN 01
65	5		RTNA	80SLO 01	40	10		RTNA	75ABU 01
65	10		SSMS	77PAU 01	40	10		RTNA	80SLO 01
66	21		ITNA	79CHA 04	41			HAA	79EVA 01
68	6		ITNA	78BEH 01	43.3			HAA	77IHN 01
72	13		AA	80JAC 01	46	2		RTNA	79HOE 01
80	6		ITNA	79CHA 02	47	5		HAA	82SUB 01
91	26		ITNA	73COR 01	49	6		HAA	76FIO 01
100	10		ITNA	84ALK 01	50			HAA	78WEL 01
100	30		ITNA	80MIC 01	50			ICPES	84MIA 01
194		17	UU	74MAS 01	50	3		ITNA	86GRE 01
300	100	34	CPXRF	78JOL 01	50	10		HAA	80AGE 02
400			OES	75BOL 02	50	10		HAA	74LOO 01
2000	600		RTNA	74SCH 03	52	3	34	HAA	78FLA 01
<u>Al (ug/g)</u>					52	3		AA	79FLA 02
<	3		ITNA	86GRE 01	52	7		ITNA	79CHA 02
<	15	L	ICPES	78CAP 01	52.9	1.9	H	RTNA	79ORV 01
<	50		CPXRF	84KAU 01	53	2	7	RTNA	80GAL 02
<	80	L	14NAA	81WIL 01	53	2	7	RTNA	81KUC 01
<	80	L	14NAA	81WIL 02	53			RTNA	84SCH 04
0.7	0.2		IENA	85GLA 02	54			RTNA	85TIA 01
1.44	0.1		HPLC	85BON 01	54		H	FAE	79FEL 01
1.8	0.2		ITNA	77GOO 01	54	2		RTNA	79WAR 02
2.21	0.15		ITNA	82EHM 01	54	2	6	HAA	81KAH 01
3.6		11	SSMS	85VOS 01	54	4	7	RTNA	80GAL 02
5			ICPES	79MCQ 01	54	4		RTNA	82BYR 01
6	2		ICPES	79ABE 01	54	4		RTNA	78GAL 01
6	3		ITNA	84GLA 02	54	5		RTNA	79MAY 01
6.1			ITNA	84GLA 11	54	5		RTNA	74HEN 01
7		17	UU	74MAS 01	55	1		RTNA	80BYR 01
8	0.6	11	ICPES	81BLA 02	55	3	7	RTNA	80GAL 02
8.2	0.8	11	ICPES	81BLA 02	55	3		RTNA	77GIL 03
11.3	2.9	6	ITNA	74HOF 01	55	3		NAA	77GIL 01
15.3	1.1		ITNA	80SLO 01	56	3	6	HAA	81KAH 01
20.4	2.9	6	ITNA	74HOF 01	56	3		HAA	81UTH 01
20.8	0.7		RTNA	77BUO 01	56	4		RTNA	77LIE 01
23.4	0.6		RTNA	79WAR 02	56	4		RTNA	75LIE 01
23.6	2		ITNA	79CHA 02	56.6	1.2		RTNA	73DAM 01
30	65	RD	ITNA	79IMA 03	56.6	1.2		NAA	74HEY 01
30	65	R	ITNA	79IMA 01	57			ASV	78DAV 01
					58	3		RTNA	79HEI 04

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>As (ng/g) cont.</u>					<u>Be (ng/g)</u>				
58	3		RTNA	79ROS 02	<	3	L	ICPES	82SCH 01
58.5	9		NAA	76GUZ 01	<	60	L	ICPES	78CAP 01
59			RTNA	75STE 02	3	1	6	ICPES	82SCH 01
59		7	RTNA	81KUC 01	5	3		FAA	75OWE 01
59	9		AA	83RAP 01	17	4		FLUOR	77WIC 01
60	6		RTNA	83DAN 01	<u>Bi (ng/g)</u>				
63	4		RTNA	74ORV 01	<u>Br (ug/g)</u>				
63	5		RTNA	85GAU 04	150			AF	85NAR 02
64		17	UU	74MAS 01	4.3		17	UU	74MAS 01
66			ASV	81LEE 01	4.7	0.8		CPXRF	77RIN 01
66	23		RTNA	74SCH 03	6.1	0.6		CPXRF	77WIL 02
69		17	UU	74MAS 01	7.35		17	UU	74MAS 01
70	10		RTNA	83BRA 01	7.4	0.5		EXRF	80DYC 01
80	30		RTNA	77TJI 01	7.7	0.5	5	ITNA	80HOE 01
100			ITNA	77OSB 01	7.8	0.1	5	IENA	79GLA 02
100	10		GCMES	75TAL 01	8.0	0.1	5	IENA	79GLA 02
150			ICPES	80HAA 01	8.0	0.5		RTNA	76GAU 01
200	300	6	CPXRF	77WIL 03	8	1		RTNA	77TJI 01
280	100	34	CPXRF	78JOL 01	8.22	0.4		RTNA	79WAR 02
290	110		ICPES	80HAA 01	8.23	0.45		IENA	86CHI 01
500			FAA	78CAP 01	8.4	0.6		ITNA	84GLA 02
600	500	6	CPXRF	77WIL 03	8.5	1		ITNA	79CHA 02
<u>Au (ng/g)</u>					8.5	1.3		IENA	84GLA 11
<	0.5	L	RTNA	80SLO 01	8.5	9.9	R	ITNA	79IMA 01
0.058	0.013		RTNA	82ZEI 01	8.5	9.9	RD	ITNA	79IMA 03
0.083	0.021		RTNA	84TJI 01	8.56			CPXRF	84KAU 01
0.23	0.16		RTNA	77TJI 01	8.6	0.4		NAA	78GAN 01
1.7	0.4		RTNA	77KUS 01	8.8	0.3		ITNA	84GLA 11
4.9	0.8		RTNA	74SCH 03	8.8	0.3	5	ITNA	80HOE 01
6	1		ITNA	79CHA 02	8.8	0.4		EXRF	79GIA 01
7	0.8		RTNA	79WAR 02	8.8	1.4		EXRF	77NIE 01
29.2	2.1		RTNA	77NAD 01	8.9	2.1		ITNA	77HAM 01
<u>B (ug/g)</u>					9			IENA	85GAU 04
2.24		6	AE+AF	74DAU 01	9.0	0.6		ITNA	77JUR 02
2.34		6	AE+AF	74DAU 01	9.0	0.6		ITNA	78BEH 01
3.2	0.2		TCGS	79FAI 01	9.0	0.9		ITNA	86GRE 01
4	1		ICPES	79ABE 01	9	1		CPXRF	78VIS 01
<u>Ba (ug/g)</u>					9.3		1	IENA	79KUC 01
<	20	L	14NAA	81WIL 02	9.3	0.8		ITNA	80MAE 01
<	30	L	ITNA	78CAP 01	9.3	3		CPXRF	79REN 02
0.12	0.13		RTNA	76GAU 01	9.34	0.82		ITNA	74DON 01
0.13			ICPES	78DAH 01	9.37			ITNA	73NAD 01
0.15		11	SSMS	85VOS 01	9.4	0.4		XRF	77SMY 01
0.22	0.02		RTNA	79WAR 02	9.5			ITNA	80CRE 01
1.24			ICPES	84NAD 01	9.5	1	6	CPXRF	77WIL 03
1.8	0.39		RTNA	77GUI 03	9.6	0.7		CPXRF	85CLA 01
2.92			ITNA	73NAD 01	9.7		1	IENA	79KUC 01

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TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Cd (ng/g) cont.</u>					<u>Cd (ng/g) cont.</u>				
250			AA	78EVA 01	280	70		AA	83RAP 01
250			FAA	83ATS 01	280	70		CPAA	85CAN 01
250	10	11	ASV	84ADE 03	283			RTNA	75HAL 01
250	20	11	ASV	84ADE 03	283		17	UU	74MAS 01
250	20		RTNA	83BRA 01	283	50		FAA	79STO 01
250	20		AF	75EPS 01	288	26		FAA	81ZAU 01
250	25		AA	82EVA 01	288	29		RTNA	80GRE 01
250	30		VV	79CHA 02	288	35		RTNA	75LIE 01
253	24		AE+AF	74RAI 02	288	35		RTNA	77LIE 01
253	24		FAA	82ATS 01	290		17	UU	74MAS 01
260		11	ASV	81DAN 01	290		17	UU	74MAS 01
260			FAA	82AKA 01	290		14	FAA	80CHA 08
260			FAA	75SLA 01	290		14	FAA	80CHA 08
260	10		RTNA	74ORV 01	290		11	ASV	81DAN 01
260	10		FAA	84RAB 01	290			FAA	80JAR 01
260	20		FAA	84ROS 01	290	10		FAA	80LEG 01
260	20	11	ASV	84ADE 03	290	10		AA	84HUD 01
260	20		AA	74ULL 01	290	10	D	AA	84HUD 03
260	20		FAA	79DAB 02	290	10		RTNA	77BAJ 02
260	30		RTNA	74SCH 03	290	13	7	AA	73TAL 01
260	30		FAA	78PIE 01	290	20		NAA	76DER 01
260	30		RTNA	80SLO 01	290	20		AA	79FLA 02
266	20		FAA	74RAI 02	290	30		RTNA	74HEN 01
266	27		RTNA	79MAY 01	290	30		RTNA	79DER 01
269	13		RTNA	74ROO 01	290	30		FAA	79WAR 01
270			AA	77FRI 01	290	30		FAA	84GLA 02
270		17	UU	74MAS 01	290	30		ICPES	84BLA 01
270		17	UU	74MAS 01	293	9		ITNA	86GRE 01
270		17	UU	74MAS 01	300			ASV	82GAJ 01
270	2		FAA	83STE 05	300			ICPES	80HAA 01
270	10		ICPES	83SCH 04	300	18	7	AA	73TAL 01
270	10	11	AA	81BLA 03	300	18		FAA	74TAL 01
270	20	11	ASV	84ADE 03	300	20		RTNA	78GAL 01
270	20		AA	85ADE 02	300	20		RTNA	77TJI 01
270	20		AA	79WAR 01	300	20	7	RTNA	80GAL 02
270	20		AA	75EPS 01	300	20		VOLT	84OST 01
270	30		AA	79LAK 01	300	23		AF	75WOR 01
270	50		FAA	81KNA 01	300	25		FAA	74TAL 01
270	60		TCGS	79FAI 01	300	25	7	AA	73TAL 01
270	80		FAA	74GRO 01	300	30		RTNA	76GAU 01
275	5		FAA	78HUD 01	300	40	7	RTNA	81KUC 01
280			ASV	74COP 01	300	50		AA	75HIN 01
280			FAA	82HOE 01	300	70		AA	80AGE 01
280			AA	84KAN 01	300	700		AA	76LAN 01
280			RTNA	85TIA 01	300	800	6	FAA	76LAN 01
280	20		SSMS	77PAU 01	310			RTNA	75STE 02
280	30		AA	80SCH 05	310		7	RTNA	81KUC 01
280	30	D	FAA	80SCH 08	310		11	FAA	81DAN 01
280	50	11	AA	81BLA 03	310			ICPES	85NAR 02
280	50		ICPES	84MIA 01	310			AF	85NAR 02

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Cd (ng/g) cont.</u>					<u>Cl (ug/g) cont.</u>				
310	20		FAA	78GRO 01	2700	300		ITNA	84GLA 11
310	40		ICPES	82AZI 01	2715	151		ITNA	84ALK 01
310	50		FAA	80POL 01	2740			CPXRF	84KAU 01
320			FAA	83ATS 01	2750			ITNA	73NAD 01
320		11	FAA	81DAN 01	2750	110		ITNA	78FUR 01
320	40	11	AA	81BLA 03	2760			ITNA	82AKA 01
320	130	6	FAA	76LAN 01	2770	40		ITNA	86GRE 01
337	58		RTNA	79PLA 01	2793	294.4		NAA	76GUZ 01
350	50	11	ICPES	82JON 01	2800	150		IENA	84GLA 11
360	28		ICPES	82EVA 01	2830	200		NAA	78GAN 01
380	20	6	DCPES	83FRA 01	2900			ITNA	80CRE 01
390	70	11	ICPES	82JON 01	3000	100		TCGS	79FAI 01
400	40	6	DCPES	83FRA 01	3000	190		ITNA	77HAM 01
550	450		AA	79MON 01	3200	800		CPXRF	79REN 02
560	130	34	CPXRF	78JOL 01	3500	200		14NAA	81WIL 02
					11663		17	UU	74MAS 01
<u>Ce (ng/g)</u>					<u>Co (ng/g)</u>				
13		17	UU	74MAS 01					
18	4		RTNA	80SLO 01	120		17	UU	74MAS 01
21.5			RTNA	77LAU 02	160	10		ASV	85ADE 01
22			RTNA	82LAU 01	162			GC	85MEY 02
25	3		RTNA	83TJI 01	170			ITNA	73NAD 01
46	14		RTNA	76GAU 01	170	10		NAA	78GAN 01
74	28		RTNA	86TSU 01	170	20		ITNA	79CHA 02
<u>Cl (ug/g)</u>					174		17	UU	74MAS 01
1880		17	UU	74MAS 01	178		14	FAA	80CHA 08
2155	170	34	CPXRF	78JOL 01	178	5		RTNA	79WAR 02
2410	600		EXRF	77NIE 01	180	10		RTNA	77GIL 03
2460		35	ITNA	81GLA 04	180	10		NAA	77GIL 01
2480		17	UU	74MAS 01	180	30		ITNA	79WAR 01
2500	130	35	ITNA	81GLA 03	182		14	FAA	80CHA 08
2530			ITNA	78CAP 01	188	27		NAA	76GUZ 01
2542	300		ITNA	77ZIK 01	190		1	IENA	79KUC 01
2550	100		ITNA	74WES 01	190	20	6	ITNA	74BEC 01
2570	3110	R	ITNA	79IMA 01	190	20		AA	84KAN 01
2570	3110	RD	ITNA	79IMA 03	200		11	SSMS	85VOS 01
2590		17	UU	74MAS 01	200	16		FAA	74WES 01
2610		17	UU	74MAS 01	200	40		ITNA	80LAK 01
2610	200		ITNA	79CHA 02	203			RTNA	75STE 02
2615	192		RTNA	74SCH 03	210			ITNA	79KUC 01
2632	67		ITNA	77GUI 02	210	10		ITNA	86CHI 01
2632	67		NAA	76MIL 02	210	20		ITNA	74WES 01
2650	100		ITNA	80SLO 01	210	30		AA	79FLA 02
2680	80		RTNA	79WAR 02	210	40		FAA	79WAR 01
2685	165		PAA	76KAT 04	217	13		ITNA	81KRI 01
2690	170		EXRF	80DYC 01	220			RTNA	75ABU 01
2700	70		ITNA	84GLA 02	223	11		RTNA	75LIE 01
					223	11		RTNA	77LIE 01
					225		17	UU	74MAS 01

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Co (ng/g) cont.</u>					<u>Cr (ng/g)</u>				
225	7		COLOR	82KIR 01	22	10		ICPES	81BLA 01
230	20		RTNA	80SLO 01	35	3		GC	81BLA 01
230	20	6	ITNA	74BEC 01	35	4	11	FAA	80KUM 01
230	100		ITNA	77ZIK 01	44.9	5	11	RTNA	76PIE 01
233	5		RTNA	79DER 01	51		17	UU	74MAS 01
236	9		ITNA	80MIC 01	53	9		FAA	74WOL 01
240			CHEML	79MIL 01	60	12		AA	80JAC 01
240			ITNA	80CRE 01	60	30		RTNA	74SCH 03
240	10		ITNA	73COR 01	61	3	11	FAA	80KUM 01
240	10		ITNA	84ALK 01	72	8	11	ICPES	81BLA 02
240	14		IENA	75MAZ 01	72	13		ITNA	86GRE 01
240	20		RTNA	74HEN 01	74	5		RTNA	77LIE 01
240	30		ITNA	78BEH 01	78.9		11	NAA	79VER 01
240	37		ITNA	77HAM 01	80.6		11	NAA	79VER 01
245		7	RTNA	81KUC 01	85	9		RTNA	78GAL 01
246	14		RTNA	77TJI 01	85	9	7	RTNA	80GAL 02
247	31		ITNA	81MOL 01	88		7	RTNA	81KUC 01
248	25		ITNA	79ZEI 01	88	8	11	FAA	80KUM 01
250			ITNA	82AKA 01	92	9	11	ICPES	81BLA 02
250	30		CHEML	81MAR 01	92	10	7	RTNA	81KUC 01
252	8		ITNA	86GRE 01	94	8	7	FAA	80CHA 01
257	2		ITNA	74LIN 01	94.8	19.5	11	RTNA	76PIE 01
260		17	UU	74MAS 01	96	8		RTNA	79TJI 01
260	7	7	RTNA	81KUC 01	98	5		RTNA	75LIE 01
260	10		ITNA	79SAT 01	115	42		RTNA	79PLA 01
260	21		RTNA	76GAU 01	120	40		AA	79FLA 02
265			AA	79ABU 01	120	70		ITNA	78BEH 01
269	30		AA	80JAC 01	123	6		RTNA	77LIE 01
275			FAA	82HOE 01	130		17	UU	74MAS 01
280			NAA	79MIL 01	130			ITNA	80CRE 01
290			ITNA	78CAP 01	130	30		RTNA	78GOE 01
300			ICPES	80HAA 01	130	50		RTNA	77TJI 01
300			ITNA	77OSB 01	133	12		ITNA	80MIC 01
300		11	SSMS	85VOS 01	140		17	UU	74MAS 01
300	70		IENA	86CHI 01	144	23	7	FAA	80CHA 01
310	60		RTNA	74SCH 03	150		17	UU	74MAS 01
310	120		14NAA	81WIL 02	150	10		NAA	78GAN 01
310	120		14NAA	81WIL 01	150	30		ITNA	74DON 01
340		17	UU	74MAS 01	160	5	11	RTNA	78MCC 01
360	60		ITNA	78FUR 01	160	60		RTNA	76GAU 01
370	60		RTNA	77MEL 01	163	10		RTNA	74MCC 01
390		17	UU	74MAS 01	180	100		CPXRF	78VIS 01
400			FAA	75SLA 01	190	10		FAA	79WAR 01
410	120		RTNA	77KUS 01	200	20		DCPES	79REE 01
					200	20	D	DCPES	81REE 01
					210	2	11	RTNA	78MCC 01
					210	30		ITNA	78MCC 01
					210	31		ITNA	74MCC 01
					210	40		ITNA	79WAR 01
					210	70		RTNA	79WAR 02
					280	200		ITNA	79SAT 01

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Cr (ng/g) cont.</u>					<u>Cu (ug/g)</u>				
400	500	11	ICPES	82JON 01	87		11	SSMS	85VOS 01
400	500	11	ICPES	82JON 01	93	12	6	ITNA	74HOF 01
490		17	UU	74MAS 01	124		11	XRF	83PEL 01
500	3500	R	ITNA	73NAD 01	138	18.8		FAA	74GRO 01
540		17	UU	74MAS 01	146	40		ITNA	77ZIK 01
600			ITNA	79KUC 01	148	19		FAA	77FUJ 01
870	60		CHEML	74LI 01	151	191	RD	ITNA	79IMA 03
1000	400		FAE	83MAR 04	151	191	R	ITNA	79IMA 01
1000	600	11	RTNA	76STE 01	153			CPXRF	78UEM 01
1160	600		ITNA	76STE 01	154	7		ICPES	85FAS 01
1300		17	UU	74MAS 01	154	43		CPAA	77ZIK 01
1400	800	11	RTNA	76STE 01	161	12		RTNA	77KUS 01
1570		17	UU	74MAS 01	167		17	UU	74MAS 01
1600		11	SSMS	85VOS 01	167			XRF	80SUZ 02
1600	800	11	RTNA	76STE 01	168	8	1	ICPES	78SUD 01
1700	900	11	RTNA	76STE 01	169	7	12	FAA	85CAR 02
1900	1000	11	RTNA	76STE 01	170	8		RTNA	80SLO 01
2000		11	SSMS	85VOS 01	173		17	UU	74MAS 01
2400	700		CPXRF	77WIL 02	173.5	13.9	34	CPXRF	78JOL 01
2700			FAA	83ATS 01	173.6	18.5		RTNA	83DAN 01
					174	2		EXRF	80DYC 01
					175		17	UU	74MAS 01
					176	9	6	ITNA	74HOF 01
					177	1		AA	79MCQ 01
					177	7		RTNA	77TJI 01
					177	19	5	ITNA	80TOU 01
					179	19		ICPES	84BLA 01
					180		17	UU	74MAS 01
					180	3		AA	73TAL 01
					180	8	11	ICPES	81BLA 02
					180	15		CPXRF	84BIS 01
					181		11	SSMS	85VOS 01
		17	UU	74MAS 01	181		17	UU	74MAS 01
			RTNA	79WAR 02	181	124		ITNA	82KIM 01
			ITNA	79SAT 01	182	6	1	ICPES	78SUD 01
			RTNA	76GAU 01	182	8	7	RTNA	81KUC 01
			ITNA	73COR 01	182	13		CPXRF	81SAI 01
		17	UU	74MAS 01	182			ICPES	84NAD 01
			ITNA	86CHI 01	183			RTNA	84FAR 02
			IENA	86CHI 01	183	2	7	RTNA	77GLA 01
			ITNA	80CRE 01	183	8	35	RTNA	76WIL 01
			ITNA	84ALK 01	183	8		PAA	79MAN 01
			ITNA	73NAD 01	183	19		CPXRF	77PAU 01
		11	SSMS	85VOS 01	184	5		SSMS	85CAR 02
		17	UU	74MAS 01	184	6	12	FAA	78CAP 01
			RTNA	77MEL 01	185			FAA	84FAR 02
		7	RTNA	80GAL 02	185	3	7	RTNA	83FRA 01
					185	3.3	6	DCPES	74WES 01
					185	6.8	11	RTNA	78GAL 01
					185	7		RTNA	80GAL 02
					185	7	7	RTNA	83MAR 04
					185	8		FAE	

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Cu (ug/g) cont.</u>					<u>Cu (ug/g) cont.</u>				
185	9	11	ICPES	82JON 01	191		11	FAA	81DAN 01
185	14		AA	83RAP 01	191		11	XRF	83PEL 01
186			ITNA	84GLA 11	191	6.2	11	RTNA	74WES 01
186	2		ICPES	79MCQ 02	191	9		CPXRF	85CLA 01
186	5.2	D	AA	84HUD 03	191	10.5		NAA	76GUZ 01
186	5.2		AA	84HUD 01	191	34		XRF	77SMI 04
186	5.5	11	FAA	74WES 01	192	4		EXRF	79GIA 01
186	5.5	6	CPXRF	77WIL 03	192	4		FAA	81CLE 02
186	16		EXRF	77NIE 01	192	6		ITNA	86GRE 01
187			CPXRF	84KAU 01	192	8		ICPES	80SCH 08
187		7	RTNA	81KUC 01	192	9	6	FAA	76LAN 01
187	2	2	FAA	84MIL 01	192	26		ICPES	84ZER 01
187	2.3		AA	80AGE 01	193		11	FAA	81DAN 01
187	4	11	ICPES	81BLA 02	193	1		ICPES	85WOL 01
187	6		ITNA	78FUR 01	193	10		FAA	80LON 01
187	8		RTNA	75LIE 01	193	14		RTNA	77GIL 03
187	8		RTNA	77LIE 01	193	14		NAA	77GIL 01
187	13		ITNA	74DON 01	193	14	7	RTNA	80GAL 02
187.4	15.5		AA	79MON 01	194		17	UU	74MAS 01
188		11	XRF	83PEL 01	194		17	UU	74MAS 01
188	1		ICPES	79MCQ 01	194			FAA	75SLA 01
188	3		RTNA	74HEN 01	194	1		AA	75ABU 01
188	6		AA	79FLA 02	194	3		ASV	85ADE 01
188	6		HPLC	85SAI 01	194	4		AA	82HAR 01
188	9		AA	75HIN 01	194	6		ICPES	82EVA 01
188	9.8	11	FAA	74WES 01	194	13	6	CPXRF	77WIL 03
188	10		RTNA	79WAR 02	194	31		AA	79LAK 01
188	10		ITNA	79WAR 01	195		6	POL	72SIN 01
189			ITNA	82AKA 01	195			AE+AF	79ULL 01
189		11	XRF	83PEL 01	195	3		AA	79WAR 01
189	2	1	AA	77UCH 02	195	4		AA	80UCH 01
189	2	1	AA	77UCH 02	195	5		RTNA	76GAU 01
189	2		AA	80IID 01	195	10		ICPES	81KNA 01
189	3.4	6	DCPES	83FRA 01	196			ASV	83HOL 01
189	4	11	ICPES	82JON 01	196		14	FAA	80CHA 08
189	4		CPXRF	81ROB 02	196			RTNA	85TIA 01
189	6		FAA	81CLE 01	196	6	6	FAA	76LAN 01
189	7		ICPES	78JAC 01	196	8		CPXRF	77WIL 02
189	12		CPXRF	80KIR 01	196	9		FAA	75SME 01
189	20		EXRF	84KNA 01	196	9		AA	81KRI 01
190		11	AA	81MOH 01	196	14.7		RTNA	79PLA 01
190	1		RTNA	80WOI 01	196	28		RTNA	82KIM 01
190	2		FAA	84HAR 02	197			NAA	78GAN 01
190	3		FAA	79WAR 01	197	4		ITNA	79SAT 01
190	8		VV	80SCH 05	197	11	2	FAA	84MIL 01
190	10		ICPES	79ABE 01	197	13	6	POL	72SIN 01
190	14		ITNA	84ALK 01	197	16		CPXRF	80MAE 01
190	15		ASV	81DOG 01	198			AA	80EVA 01
190	24		ITNA	77HAM 01	198	7		AA	82EVA 01
191		6	NAA	72SIN 01	198	9		ITNA	79CHA 02
191		14	FAA	80CHA 08	199	6		ITNA	80MAE 01

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Cu (ug/g) cont.</u>					<u>F (ng/g)</u>				
199	12		ITNA	84GLA 02	40	20		ISE	83KNA 01
200		11	AA	81MOH 01	120			ISE	84GLA 02
200	2		RTNA	79DER 01					
200	4		ICPES	83SCH 04	<u>Fe (ug/g)</u>				
200	7		FAA	84ROS 01	110	5		AA	75HIN 01
201			ICPES	78DAH 01	132		17	UU	74MAS 01
201	1	7	RTNA	84FAR 02	137	5		14NAA	81WIL 01
201	4	13	HPLC	85BON 01	149		11	XRF	83PEL 01
201.7	7.9		RTNA	77BUO 01	150		11	XRF	83PEL 01
202	4	13	HPLC	85BON 01	155	49	11	AA	78GOR 01
204			ICPES	80HAA 01	186	37		AA	79MAN 01
204	9		CPXRF	78VIS 01	187	80	12	FAE	83MAR 04
204	9		AA	84CUB 01	205			CPXRF	78UEM 01
205		6	AA	72SIN 01	209	28	11	ICPES	82JON 01
206	5		RTNA	74RAV 01	220	16		RTNA	77MEL 01
207		11	ASV	81DAN 01	226		17	UU	74MAS 01
208	11		AA	76LAN 01	229		17	UU	74MAS 01
208	27		RTNA	74SCH 03	230	37		FAA	77FUJ 01
210			ICPES	78CAP 01	234	6		FAA	84HAR 02
210	12.5		FAA	75PIC 01	236	5		RTNA	75LIE 01
213		17	UU	74MAS 01	236	5		RTNA	77LIE 01
216		11	ASV	81DAN 01	239			ICPES	84NAD 01
216	22	32	CPXRF	77CRO 01	240		11	XRF	83PEL 01
225	21		ICPES	82AZI 02	240		17	UU	74MAS 01
241	45		CPAA	78MCG 01	240	7		EXRF	80DYC 01
241	54	32	CPXRF	77CRO 01	240	12		RTNA	77TJI 01
241	65		CPXRF	76ZEI 01	241	8	1	ICPES	78SUD 01
270	90		14NAA	81WIL 02	242		17	UU	74MAS 01
277	14		AA	79MAT 02	243	14		FAA	81CLE 02
394	3		AA	81UCH 01	244	2		ICPES	79MCQ 02
<u>Dy (ng/g)</u>					244	6		ICPES	79MCQ 01
2.4	0.8		RTNA	76GAU 01	244	10		AA	79MCQ 01
3.4	0.1		RTNA	86TSU 01	247.3			AA	79LOC 01
<u>Er (ng/g)</u>					248	16		CPXRF	80MAE 01
<	0.5	L	RTNA	82LAU 01	249			RTNA	75STE 02
<	0.5	L	RTNA	76GAU 01	250	12		CPXRF	78VIS 01
0.5			RTNA	77LAU 02	250	22		ITNA	77HAM 01
<u>Eu (ng/g)</u>					252			ITNA	79KUC 01
0.235	0.024		RTNA	76GAU 01	252	25		ICPES	81BLA 01
0.3	0.04		RTNA	86TSU 01	253			FAA	78CAP 01
0.35			RTNA	82LAU 01	254			ICPES	78CAP 01
0.35			RTNA	77LAU 02	254	7	2	FAA	84MIL 01
0.4	0.1		RTNA	83TJI 01	255	8		ITNA	79SAT 01
3			ITNA	78CAP 01	255	15		ITNA	79ZEI 01
140			ITNA	80CRE 01	255	30		ITNA	78FUR 01
310			ITNA	73NAD 01	256			OES	75BOL 02
					256	3		AA	80IID 01
					256	3	1	AA	77UCH 02
					256	32		CPXRF	79MAN 01
					257			ITNA	78CAP 01

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Fe (ug/g) cont.</u>					<u>Fe (ug/g) cont.</u>				
257		11	XRF	83PEL 01	270	47		ITNA	74DON 01
257		14	FAA	80CHA 08	271	6		ITNA	80MIC 01
257	30	32	CPXRF	77CRO 01	271	27		ITNA	81MOL 01
258		7	RTNA	81KUC 01	271.5	11.5	34	CPXRF	78JOL 01
258	10	11	ICPES	82JON 01	272	3		AA	82TIN 01
259	12	11	ICPES	81BLA 02	272	9.5	11	AA	74WES 01
260			CPXRF	84KAU 01	272	15	7	RTNA	81KUC 01
260.9	12.89		NAA	76GUZ 01	272	27		RTNA	76GAU 01
261	8		ITNA	86GRE 01	272	71		XRF	77SMI 04
261	15		ICPES	85FAS 01	273	5		ITNA	80MAE 01
262			ITNA	73NAD 01	273	8.5	6	CPXRF	77WIL 03
262	7		ICPES	78JAC 01	273	9		FAA	81CHA 01
262	7.7	6	DCPES	83FRA 01	273	10		AA	84CUB 01
262	10		FAA	81CLE 01	274	5		AA	80UCH 01
262	13		ICPES	79ABE 01	274.5	28		PAA	76KAT 04
262	18		CPXRF	81SAI 01	275	4	13	HPLC	85BON 01
263	12		ITNA	84ALK 01	275	6	13	HPLC	85BON 01
263	12		CPXRF	81POB 02	275	12		AA	83RAP 01
264	3	11	ICPES	82JON 01	276			FAA	75SLA 01
264	4	2	FAA	84MIL 01	276	2	1	AA	77UCH 02
264	6	11	ICPES	82JON 01	277	2		ITNA	74LIN 01
264	29		ITNA	78BEH 01	277.9	16.7	6	ITNA	74BEC 01
264	44		ITNA	86CHI 01	278			AA	80EVA 01
265	5		GC	81BLA 01	278	14		CPAA	77ZIK 01
265	11		RTNA	79WAR 02	279	20		RTNA	77GIL 03
265	16		ITNA	74WES 01	280			AA	82WIL 04
265	19		ITNA	81KRI 01	280		11	SSMS	85VOS 01
265	25		NAA	78GAN 01	280	30		ITNA	77ZIK 01
265	30		ITNA	79CHA 02	281	2		ICPES	85WOL 01
266	5	11	ICPES	81BLA 02	282			ICPES	80HAA 01
266	9	D	ICPES	80SCH 08	282	26		ICPES	84ZER 01
266	9		ICPES	80SCH 05	283	60		CPAA	78MCG 01
266	10	11	AA	74WES 01	283	68		CPXRF	76ZEI 01
266	10	11	AA	78GOR 01	285		17	UU	74MAS 01
267		14	FAA	80CHA 08	287	17		CPXRF	77WIL 02
267	5		EXRF	79GIA 01	287	81		IENA	86CHI 01
268	8		FAA	80LON 01	289	52	32	CPXRF	77CRO 01
268	24		EXRF	77NIE 01	290			ITNA	80CRE 01
268	25	1	ICPES	78SUD 01	293		17	UU	74MAS 01
268	38		VV	79LAK 01	293	8		RTNA	80SLO 01
269	9		CPXRF	85CLA 01	293	8		ITNA	79DAS 01
269	10		ICPES	81KNA 01	293	21	6	CPXRF	77WIL 03
269	12		ITNA	80LAK 01	300	31	12	FAA	85CAR 02
270			ICPES	78DAH 01	305	33		ICPES	84BLA 01
270		11	SSMS	85VOS 01	310	28		RTNA	74SCH 03
270	4.2	6	DCPES	83FRA 01	310	33	12	FAA	85CAR 02
270	12		ITNA	73COR 01	315			ITNA	77OSB 01
270	12		COLOR	78GOR 01	331		17	UU	74MAS 01
270	18		CPXRF	84BIS 01	334	10		14NAA	81WIL 02
270	20	7	RTNA	80GAL 02	343	19		AA	82HAR 01
270	20		NAA	77GIL 01	345	7	12	FAE	83MAR 04

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Fe (ug/g) cont.</u>					<u>Hg (ng/g) cont.</u>				
350	64		RTNA	77KUS 01	16	1.2		FAA	72ROO 01
364		17	UU	74MAS 01	16	1.6		RTNA	79MAY 01
1395			AE+AF	79ULL 01	16	2		FAA	77GLA 03
1433		17	UU	74MAS 01	16	2		RTNA	77TJI 01
<u>Ga (ng/g)</u>					16	2		AA	79FLA 02
					16	3		CVAA	80TON 01
					16	3	7	RTNA	81KUC 01
< 240		L	IENA	78WAN 01	16	5		CVAA	80KOR 01
< 500		L	EXRF	79GIA 01	16.1	0.4		ITNA	86GRE 01
< 20000		L	14NAA	81WIL 02	16.2	0.08		RTNA	84DRA 01
4			RTNA	74HEN 01	16.2	3	14	FAA	74CHU 03
1100	700		CPXRF	77WIL 02	16.4	0.4		RTNA	74HEN 01
<u>Gd (ng/g)</u>					16.4	4.3		NAA	76GUZ 01
					16.5	0.8		CVAA	72RAI 01
< 1.4		L	RTNA	76GAU 01	16.8	1.8	5	RTNA	80GRE 01
1.8			RTNA	82LAU 01	17	2		RTNA	74ORV 01
2.4			RTNA	77LAU 02	17	2		RTNA	79WAR 02
<u>Ge (ng/g)</u>					17	2		CVAA	82SUL 01
					17	4	2	CVAA	79KNE 01
< 400		L	EXRF	79GIA 01	17.3	2.8	5	RTNA	80GRE 01
<u>H (%)</u>					17.4	2		RTNA	82GRI 01
					18	2		RTNA	79CHA 02
6.8	0.3		TCGS	79FAI 01	18	3		RTNA	75LIT 01
7	0.1	35	TCGS	79GLA 04	18	40	R*	AA	83YAN 01
7.12	0.1		CB	80SCH 02	20			UU	74FEL 01
<u>Hf (ng/g)</u>					20		17	UU	74MAS 01
					20	2		CVAA	77AND 01
1			RTNA	80SLO 01	20	5		CVAA	84BAR 02
7.3			ITNA	80CRE 01	22	1		RTNA	75LIE 01
<u>Hg (ng/g)</u>					22.1	6.3	14	FAA	74CHU 03
					22.3	1.3		RTNA	77LIE 01
13.7	1.4	14	FAA	74CHU 01	30	10		FAA	78EGA 01
14	2		FAA	79STO 01	41		17	UU	74MAS 01
14	2		CVAA	78MAT 01	47	4		RTNA	77MEL 01
14.5	1.7		RTNA	72RAI 01	200	21		ITNA	75LIT 01
14.5	3.4		RTNA	72ROO 01	<u>Ho (ng/g)</u>				
14.5	3.4		RTNA	72ROO 02					
14.7			RTNA	75STE 02	<	0.94	L	RTNA	76GAU 01
15	2		MPOES	81TAN 01	0.2			RTNA	82LAU 01
15	4		RTNA	74SCH 03	0.25			RTNA	77LAU 02
15.8	5.1	14	FAA	74CHU 03	0.3	0.1		RTNA	86TSU 01
16		7	RTNA	81KUC 01					
16			CVAA	79TAG 01					
16			CVAA	82GLA 02					
16	0.3		RTNA	83GRE 02					
16	1		RTNA	74BYR 03					

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>I (ng/g)</u>					<u>K (%) cont.</u>				
180	12		RTNA	77ROO 01	0.95	0.05		CPXRF	80KIR 01
190			ITNA	84GLA 11	0.96			ITNA	79KUC 01
200	10		RTNA	79WAR 02	0.96			ITNA	73NAD 01
210	60		IENA	84FAR 01	0.96	0.06		AA	74WES 01
220	30		ITNA	79CHA 02	0.961			CPXRF	84KAU 01
221.8	14.8		RTNA	80GVA 01	0.964			CPXRF	76ZEI 01
230	40		IENA	84GLA 11	0.964	0.0244		ITNA	84ALK 01
237			IENA	85GAU 04	0.9645	0.0045		CPAA	78MCG 01
246	11	35	RTNA	81ALL 01	0.969	0.022		FE	80UCH 01
249	12	34	RTNA	81ALL 01	0.969	0.09		ITNA	79CHA 02
249	12		RTNA	81STR 01	0.969	0.091		PAA	76KAT 04
251	16		RTNA	83ALL 01	0.9695	0.0785		ITNA	74DON 01
270	30		IENA	82SAT 01	0.97	0.05	11	ICPES	82JON 01
280			NAA	79HEC 01	0.979	0.024	12	FAA	85CAR 02
280	10		MS	85SCH 01	0.979	0.028		WXRF	84ALK 01
					0.98		17	UU	74MAS 01
					0.98	0.008		FAA	84HAR 02
					0.98	0.026		ITNA	86GRE 01
					0.98	0.1		ITNA	82EHM 01
					0.9875		17	UU	74MAS 01
					0.99	0.02		ITNA	80MIC 01
					0.99	0.02	11	ICPES	82JON 01
					0.99	0.03		CPXRF	84BIS 01
					0.992	0.022		AA	75HIN 01
					0.9984	0.0648		NAA	76GUZ 01
					1.00			ITNA	77OSB 01
					1.00	0.01	2	FAA	84MIL 01
					1.00	0.03		TCGS	79FAI 01
					1.006		1	AA	78SZY 01
					1.01	0.18		ITNA	77HAM 01
					1.015		1	AA	78SZY 01
					1.02	0.01		RTNA	80WOI 01
					1.02	0.012		ITNA	78FUR 01
					1.02	0.03		AA	82HAR 01
					1.021	0.048	34	CPXRF	78JOL 01
					1.0323	0.0258		RTNA	77LIE 01
					1.0323	0.0258		RTNA	75LIE 01
					1.04	0.03		ITNA	74WES 01
					1.05	0.01		ICPES	85WOL 01
					1.05	0.02		ICPES	85WHI 02
					1.06		35	ITNA	81GLA 04
					1.06	0.08		NAA	78GAN 01
					1.087	0.124		CPXRF	79MAN 01
					1.12	0.02		ITNA	80SLO 01
					1.13	0.04		EXRF	80DYC 01
					1.15	0.06		ICPES	84BLA 01
					1.18	0.1		14NAA	81WIL 02
					1.2	0.22		FAE	83MAR 04
<u>In (ng/g)</u>									
< 1000		L	RTNA	76GAU 01					
0.05			RTNA	74RAV 01					
0.09	0.01		RTNA	78KOB 01					
<u>K (%)</u>									
0.5	0.07		CPXRF	80MAE 01					
0.63	0.11		14NAA	81WIL 01					
0.6674	0.0662		RTNA	74SCH 03					
0.7			CPXRF	78JEM 01					
0.7		11	SSMS	85VOS 01					
0.725	0.789	RD	ITNA	79IMA 03					
0.725	0.7898	R	ITNA	79IMA 01					
0.742			ITNA	78CAP 01					
0.7537		17	UU	74MAS 01					
0.76		11	SSMS	85VOS 01					
0.821		17	UU	74MAS 01					
0.84	0.13	32	CPXRF	77CRO 01					
0.85	0.02		CPXRF	85CLA 01					
0.87	0.13		ITNA	84GLA 02					
0.875			ITNA	80CRE 01					
0.904		17	UU	74MAS 01					
0.91			ICPES	84NAD 01					
0.91	0.08		RTNA	79WAR 02					
0.92		1	IENA	79KUC 01					
0.92	0.01	2	FAA	84MIL 01					
0.92	0.028		CPXRF	81ROB 02					
0.93	0.05		CPXRF	77WIL 02					
0.93	0.11		EXRF	77NIE 01					
0.935			ITNA	82AKA 01					
0.94	0.05		ITNA	80MAE 01					
0.948		17	UU	74MAS 01					
0.948		17	UU	74MAS 01					

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>La (ng/g)</u>					<u>Mg (ug/g) cont.</u>				
10	1		RTNA	74HEN 01	597	10		AA	75HIN 01
12	9		RTNA	74SCH 03	598	14		ITNA	75PIE 01
14	5		RTNA	80SLO 01	598	50		ITNA	77ZIK 01
17			RTNA	75LIE 01	600	9	1	AA	77UCH 02
17			RTNA	82LAU 01	601	5		ICPES	85WOL 01
17			RTNA	77LAU 02	601	6	6	AA	76HOW 01
17	2		RTNA	83TJI 01	602	11		AA	80UCH 01
17.3	0.4		RTNA	77LIE 01	604.6	26.84		NAA	76GUZ 01
20			ITNA	73NAD 01	605	32		AA	74WES 01
24.5	1.2		RTNA	76GAU 01	608	6		RTNA	79WAR 02
31	1		RTNA	86TSU 01	608	6		ITNA	79WAR 01
62	5		ITNA	79CHA 02	609			AE+AF	79ULL 01
70			ITNA	78CAP 01	610	15		FAA	79WAR 01
72			ITNA	80CRE 01	613			ICPES	78CAP 01
<u>Li (ng/g)</u>					616	19		ICPES	85WHI 02
164	26		AA	85EVA 01	618	10		RTNA	80WOI 01
<u>Lu (ng/g)</u>					620	20		ITNA	79CHA 02
<	0.02		RTNA	83TJI 01	629	6.7	6	DCPES	83FRA 01
<	0.1	L	RTNA	76GAU 01	629	12.3	6	DCPES	83FRA 01
0.039			RTNA	77LAU 02	636			ICPES	78DAH 01
0.039			RTNA	82LAU 01	638	34		WXRF	84ALK 01
<u>Mg (ug/g)</u>					650	60		ITNA	86GRE 01
290	40		14NAA	81WIL 01	657	9	11	ICPES	82JON 01
332	541	R	ITNA	79IMA 01	658	48		ICPES	84BLA 01
332	541	RD	ITNA	79IMA 03	659	82		ITNA	74WES 01
450		11	SSMS	85VOS 01	660	20	11	ICPES	82JON 01
516		17	UU	74MAS 01	668	42		AA	79LAK 01
517		17	UU	74MAS 01	674		17	UU	74MAS 01
555	12	2	FAA	84MIL 01	684	110		ITNA	78FUR 01
555	21	1	ICPES	78SUD 01	700	20		14NAA	81WIL 02
558	11		ITNA	84ALK 01	700	130		ITNA	77HAM 01
566			FAA	78CAP 01	712	98	1	ICPES	78SUD 01
566	10		AA	79MCQ 01	720			ITNA	84GLA 11
567			AA	79LOC 01	949			ITNA	78CAP 01
573	4		ICPES	79MCQ 02	1040			ITNA	73NAD 01
573	17		ICPES	79MCQ 01	<u>Mn (ug/g)</u>				
580	20		CPXRF	80KIR 01	5.3	0.72	6	ITNA	74HOF 01
588			ICPES	84NAD 01	7.7			FAA	83ATS 01
590	40		ICPES	79ABE 01	8	1		CPXRF	80MAE 01
593	10		AA	80IID 01	8.4	2.1		CPXRF	80KIR 01
593	10	1	AA	77UCH 02	8.5	2.6		ICPES	82AZI 02
593	49		AA	82HAR 01	8.73			FAA	77SHE 02
594	13	2	FAA	84MIL 01	9.00	0.37		FAA	74GRO 01
595	6	6	AA	76HOW 01	9.0	0.7		VV	80SCH 05
596.5	13.5		PAA	76KAT 04	9.0	0.7	D	ICPES	80SCH 08
					9.0	2.2	6	CPXRF	77WIL 03
					9.12		17	UU	74MAS 01
					9.14			ITNA	73NAD 01
					9.2		11	SSMS	85VOS 01

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Mn (ug/g) cont.</u>					<u>Mn (ug/g) cont.</u>				
9.2	0.7		AA	79FLA 02	10.1	1.1		ITNA	79SAT 01
9.2	0.9	11	ICPES	81BLA 02	10.1	1.2		CPXRF	81ROB 02
9.2	1.1	12	FAA	85CAR 02	10.1	3.6		EXRF	77NIE 01
9.2	1.8	6	CPXRF	77WIL 03	10.15	2.15		PAA	76KAT 04
9.26	0.85		RTNA	79PLA 01	10.17	0.69		NAA	76GUZ 01
9.3			ITNA	82AKA 01	10.2		17	UU	74MAS 01
9.3	0.5		CPXRF	84BIS 01	10.2		17	UU	74MAS 01
9.4	0.1	7	RTNA	84FAR 02	10.2			ASV	80CHR 01
9.4	0.3		RTNA	83DAN 01	10.2	0.1		AA	80IID 01
9.4	1.1		EXRF	79GIA 01	10.2	0.2		AA	75HIN 01
9.42		17	UU	74MAS 01	10.2	0.4		ICPES	82EVA 01
9.44	1.16		FAA	84HAR 02	10.2	0.45	11	RTNA	74WES 01
9.5		17	UU	74MAS 01	10.2	1	1	AA	77UCH 02
9.5	0.5		ITNA	82KIM 01	10.23	0.43		RTNA	74RAV 01
9.5	0.7	11	ICPES	81BLA 02	10.3	0.2		ITNA	82EHM 01
9.5	1.4		CPXRF	77WIL 02	10.3	0.2		ICPES	85WOL 01
9.6	0.4		RTNA	74HEN 01	10.3	0.2		AA	85KOJ 01
9.6	0.5		RTNA	77KUS 01	10.3	0.3		FAA	82CLE 01
9.6	0.6	11	FAA	74WES 01	10.3	0.3		FAA	81CLE 02
9.7			ICPES	78CAP 01	10.3	0.36	11	FAA	74WES 01
9.7		11	SSMS	85VOS 01	10.3	0.77		ITNA	77HAM 01
9.7	0.3		CPXRF	85CLA 01	10.3	0.8		RTNA	76GAU 01
9.7	0.3	1	ICPES	78SUD 01	10.3	1		FAA	80LON 01
9.7	0.8	11	ICPES	82JON 01	10.4			FAA	78CAP 01
9.71	1.36		ICPES	82AZI 01	10.4			AA	82CLE 01
9.77	0.79		ITNA	74DON 01	10.4	0.2		FAA	82CLE 01
9.8	1.1		FAA	82GRO 01	10.4	0.23		FAA	75PIC 01
9.9			ICPES	78DAH 01	10.4	0.3	1	AA	77UCH 02
9.9		17	UU	74MAS 01	10.4	0.4		RTNA	77BUO 01
9.9	0.3		COLOR	84HIR 02	10.4	0.4	11	ICPES	82JON 01
9.9	0.47		ITNA	74WES 01	10.4	0.6	11	FAA	75SME 01
9.9	0.9		ICPES	85WHI 02	10.4	1.1		RTNA	74SCH 03
9.95	0.22		ITNA	86GRE 01	10.5		11	XRF	83PEL 01
10		35	ITNA	81GLA 04	10.5	0.1	7	RTNA	84FAR 02
10			FAA	75SLA 01	10.5	0.1	7	RTNA	84FAR 02
10		11	AA	81MOH 01	10.5	0.2		RTNA	80WOI 01
10.0	0.5		NAA	78GAN 01	10.5	0.3	11	ICPES	82JON 01
10.0	0.6	6	ITNA	74HOF 01	10.5	0.6		AA	83RAP 01
10.0	0.7		ITNA	79WAR 01	10.5	0.6		ITNA	84GLA 02
10.0	0.7		RTNA	79WAR 02	10.5	1.1		ITNA	79CHA 02
10	1		ICPES	79MCQ 01	10.5	16	6	FAA	76LAN 01
10	1		ICPES	79MCQ 02	10.6	0.11	6	DCPES	83FRA 01
10.0	1.3		ICPES	79ABE 01	10.6	0.19	D	AA	84HUD 03
10	2		EXRF	80DYC 01	10.6	0.19		AA	84HUD 01
10	5		AA	76LAN 01	10.6	0.2		ICPES	83SCH 04
10.1			CPXRF	84KAU 01	10.6	0.7		FAA	81CLE 01
10.1			ITNA	84GLA 11	10.6	1.1		ITNA	78FUR 01
10.1	0.1		AA	82CLE 01	10.7	0.3		ITNA	80MAE 01
10.1	0.2		ITNA	80SLO 01	10.8	0.15	6	DCPES	83FRA 01
10.1	0.5	11	RTNA	74WES 01	10.8	0.2	2	FAA	84MIL 01
10.1	0.6	2	FAA	84MIL 01	10.8	0.3		RTNA	82KIM 01

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Mn (ug/g) cont.</u>					<u>Mo (ug/g) cont.</u>				
					2.97		17	UU	74MAS 01
10.8	0.8		FAA	79WAR 01	3			ITNA	73NAD 01
10.8	20	6	FAA	76LAN 01	3.0	0.2		RTNA	83DAN 01
10.9	1.2		CPXRF	79MAN 01	3.0	0.3		RTNA	77GIL 03
10.9	1.5	34	CPXRF	78JOL 01	3.0	0.3		NAA	77GIL 01
10.9	2		XRF	77SMI 04	3.0	0.3	7	RTNA	80GAL 02
11			AA	80EVA 01	3.04	0.18		IENA	75MAZ 01
11		17	UU	74MAS 01	3.06	0.7	34	CPXRF	78JOL 01
11		11	AA	81MOH 01	3.1			FAA	79BEN 01
11			ICPES	84NAD 01	3.1		1	IENA	79KUC 01
11.0	0.4		FAA	81CHA 01	3.1	0.03		RTNA	80KUL 01
11.0	0.4		AA	82EVA 01	3.1	0.5	11	ICPES	82JON 01
11.0	0.7		ICPES	84ZER 01	3.12	0.26		RTNA	78NAD 01
11.1	1.6		AA	82HAR 01	3.19	0.14		RTNA	77LIE 01
11.1	2.1		ICPES	85FAS 01	3.19	0.14		RTNA	75LIE 01
11.2	0.5		RTNA	77LIE 01	3.2			ITNA	79KUC 01
11.2	0.5		RTNA	75LIE 01	3.2	0.1		RTNA	77DIK 01
11.2	0.7		FAA	84ROS 01	3.2	0.11		ITNA	86GRE 01
11.2	1.4	1	ICPES	78SUD 01	3.23	0.09		SSMS	77PAU 01
11.4	0.8	11	FAA	75SME 01	3.3	0.2		RTNA	79WAR 02
11.4	3.7	12	FAA	85CAR 02	3.3	0.3	11	RTNA	74WES 01
11.5		17	UU	74MAS 01	3.31	0.09		COLOR	85EVA 02
11.5			ITNA	78CAP 01	3.33			RTNA	75STE 02
11.5	13.7	RD	ITNA	79IMA 03	3.39	0.24		POL	84NAG 01
11.5	13.7	R	ITNA	79IMA 01	3.4		1	IENA	79KUC 01
11.7	0.7		FAA	79WES 01	3.4	0.1	11	ICPES	82JON 01
12	2.6		ITNA	84ALK 01	3.4	0.15		FAA	74WES 01
12.5	2		DCPES	79REE 01	3.4	0.2		RTNA	80SLO 01
12.5	2	D	DCPES	81REE 01	3.4	0.2	7	RTNA	81KUC 01
13			AE+AF	79ULL 01	3.4	0.36		RTNA	82BYR 01
13	3		ITNA	77ZIK 01	3.4	0.7	5	ITNA	80TOU 01
13	6		TCGS	79FAI 01	3.42	0.11		RTNA	80VER 01
14	1		AA	79MCQ 01	3.42	0.11	11	RTNA	81COR 01
14.2	1.8		FAA	77FUJ 01	3.42	0.2		COLOR	83MAT 02
19			XRF	80SUZ 02	3.5			RTNA	84BYR 01
19	9		CPXRF	78VIS 01	3.5	0.2	11	RTNA	74WES 01
					3.5	0.6		CPXRF	77RIN 01
					3.5	1.5		CPXRF	77WIL 02
					3.6			RTNA	85TIA 01
1.81	0.07		FAA	84GOH 01	3.6	0.14	11	RTNA	81COR 01
2			ICPES	79MCQ 02	3.6	0.7		RTNA	74SCH 03
2	1		CPAA	77ZIK 01	3.6	0.9		CPXRF	80MAE 01
2.2	0.9		CPXRF	80KIR 01	3.7	0.4		14NAA	81WIL 02
2.3		11	SSMS	85VOS 01	3.71	0.25		RTNA	77TJI 01
2.5		17	UU	74MAS 01	3.78	0.356		NAA	76GUZ 01
2.5	0.1		ITNA	78FUR 01	3.8			ICPES	80HAA 01
2.6	0.4		14NAA	81WIL 01	3.8		7	RTNA	81KUC 01
2.8		17	UU	74MAS 01	3.9	0.42		RTNA	84MOK 02
2.8			ICPES	84MIA 01	4.1	0.4		CPXRF	78VIS 01
2.89	0.45		IENA	86CHI 01	4.3	1.2		ITNA	79ZEI 01
2.91	0.14		ITNA	80MIC 01	4.9		17	UU	74MAS 01
2.95	0.27		RTNA	76GAU 01	5.8	0.3		AA	79FLA 02

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>N (%)</u>					<u>Na (ug/g) cont.</u>				
10.35	0.3		TCGS	79FAI 01	2438			ITNA	78CAP 01
10.4	0.8	35	TCGS	79GLA 04	2440	160		RTNA	79WAR 02
10.42	0.11		CB	80SCH 02	2454	135		ITNA	84ALK 01
10.59	0.04		GRAV	74CAR 01	2455		1	AA	78SZY 01
10.59	0.04	D	GRAV	74CAR 05	2462	502	12	FAA	85CAR 02
10.81	0.24	D	NT	74CAR 05	2490	260	2	FAA	84MIL 01
10.82	0.24		NT	74CAR 01	2500			ITNA	80MIC 01
<u>Na (ug/g)</u>					2530	120		NAA	78GAN 01
1019		17	UU	74MAS 01	2540		1	AA	78SZY 01
1152	119	6	ITNA	74HOF 01	2550		35	ITNA	81GLA 04
1600	100		14NAA	81WIL 01	2550	190		ITNA	78BEH 01
1940	30		ITNA	80SLO 01	2570		1	IENA	79KUC 01
1980	60		ITNA	78FUR 01	2570		17	UU	74MAS 01
2000	150		14NAA	81WIL 02	2570	870	2	FAA	84MIL 01
2000	500		CPXRF	80KIR 01	2609	142		NAA	76GUZ 01
2040			ITNA	80CRE 01	2632	29		RTNA	75LIE 01
2176	77	6	ITNA	74HOF 01	2632	29		RTNA	77LIE 01
2220		17	UU	74MAS 01	2720	190		ICPES	85WHI 02
2227	200		ITNA	77ZIK 01	2730			ITNA	84GLA 11
2230	210		ITNA	77HAM 01	2768	156		RTNA	74SCH 03
2250		17	UU	74MAS 01	3010	230		ICPES	84BLA 01
2250			ITNA	84GLA 02	3100			ITNA	77OSB 01
2260	370		ITNA	77JUR 02	3100	600		TCGS	79FAI 01
2280		1	IENA	79KUC 01	<u>Nd (ng/g)</u>				
2280	300		ITNA	82SCH 05	9			RTNA	82LAU 01
2300			ICPES	84NAD 01	14.5			RTNA	77LAU 02
2300	2850	RD	ITNA	79IMA 03	18	4		RTNA	83TJI 01
2300	2850	R	ITNA	79IMA 01	170	40		RTNA	76GAU 01
2310			ITNA	79KUC 01	<u>Ni (ng/g)</u>				
2320	40		AA	75HIN 01					
2320	300		ICPES	79ABE 01					
2330	60		ITNA	74WES 01	<	60	L	ICPES	82JON 01
2340		17	UU	74MAS 01	<	60		AA	82EVA 01
2340	250		AA	82HAR 01	<	60	L	ICPES	82JON 01
2346	300	12	FAA	85CAR 02	<	120		ITNA	80MIC 01
2355			ITNA	82AKA 01	<	500		ITNA	75PIE 01
2360	30		ITNA	86GRE 01	<	500		ICPES	79ABE 01
2370		17	UU	74MAS 01	<	500	L	NAA	76GUZ 01
2370	40		PAA	76KAT 04	<	500	L	EXRF	77NIE 01
2390	20		ICPES	85WOL 01	<	590		CPXRF	84KAU 01
2400		35	ITNA	81GLA 03	<	700	L	RTNA	76GAU 01
2400			ITNA	73NAD 01	<	720	L	RTNA	81KUC 01
2400	200		AA	74WES 01	<	800	L	EXRF	79GIA 01
2400	350		FAE	83MAR 04	<	1000		RTNA	77MEL 01
2410	10		RTNA	74HEN 01	<	9000	L	14NAA	81WIL 01
2420	50		FE	80UCH 01	50			AA	78EVA 01
2425		17	UU	74MAS 01	50	50		ICPES	82EVA 01
2426	130		ITNA	74DON 01	62	18		IENA	75MAZ 01
2430	150		ITNA	79CHA 02	70	30		AA	79FLA 02

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ni (ng/g) cont.</u>					<u>Pb (ng/g)</u>				
155	19		FAA	80DOR 01	200		11	SSMS	85VOS 01
180	20		PAA	79CHA 02	240	80		FAA	77FUJ 01
195			GC	85MEY 02	250			AA	78EVA 01
200	10		ASV	85ADE 01	250	40		AA	82EVA 01
200	30		RTNA	79WAR 02	262		17	UU	74MAS 01
210			ITNA	73NAD 01	270	20	11	ASV	84ADE 03
227			VOLT	81PIH 01	280	40		AA	80AGE 01
270	120		RTNA	77TJI 01	290	20	11	ASV	84ADE 03
470		7	RTNA	81KUC 01	300			FAA	79YAS 01
520	150		IENA	86CHI 01	300	20	11	ASV	84ADE 03
600	400		CPXRF	78VIS 01	300	40		FAA	78GRO 01
700	500		CPXRF	77WIL 02	300	100		CPXRF	78VIS 01
1000	500		RTNA	80SLO 01	300	300	11	ICPES	82JON 01
1000	690		AA	79MON 01	310	20		VOLT	84OST 01
1200	100		EXRF	80DYC 01	320		14	FAA	80CHA 08
1300	200		CPXRF	79REN 02	320	13		FAA	75PIC 01
					320	30	11	ASV	84ADE 03
					320	60		FAA	79WAR 01
					328	16	11	IDMS	74CHO 02
					330			AA	77FRI 01
					330	9		FAA	83STE 05
					330	10		FAA	80POL 01
					330	10		FAA	79DAB 02
					330	20		AA	83RAP 01
					330	700		AA	76LAN 01
					333	67	11	IDMS	74CHO 02
					340		11	FAA	81DAN 01
					340	20		AA	79FLA 02
					340	20		AA	85ADE 02
					340	20	11	ASV	84ADE 03
					340	40		FAA	76HAD 01
					343	23		FAA	76KOI 01
					343	23		AA	76ZAN 02
					350			AA	84KAN 01
					350	15		FAA	81CHA 01
					350	20		FAA	82ATS 02
					350	22	6	FAA	76LAN 01
					350	40		AA	79WAR 01
					350	50		FAA	75BEH 01
					350	50	D	FAA	80SCH 08
					350	50		FAA	81KNA 01
					350	50		AA	80SCH 05
					360		11	FAA	81DAN 01
					360	12	6	FAA	76LAN 01
					360	25	6	POL	72SIN 01
					360	30		FAA	79STO 01
					360	30		SSMS	77PAU 01
					370			AA	82WIL 04
					370			ASV	82GAJ 01
					380			FAA	83ATS 01
					380			ICPES	80HAA 01

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Pb (ng/g) cont.</u>					<u>Rb (ug/g) cont.</u>				
380			FAA	82HOE 01	16.7	3.2		CPXRF	81ROB 02
380		14	FAA	80CHA 08	16.8		1	IENA	79KUC 01
380			FAA	82VAN 01	16.8	1.9	6	CPXRF	77WIL 03
380			ASV	74COP 01	16.9			ITNA	79KUC 01
380	76		ASV	79STO 01	17	0.7		ITNA	80MIC 01
390		6	POL	72SIN 01	17	1		EXRF	80DYC 01
390		11	ASV	81DAN 01	17	3		ITNA	77ZIK 01
390		11	ASV	81DAN 01	17.4	1.8		NAA	78GAN 01
390	40		FAA	84ROS 01	17.72	1.8		ITNA	81MOL 01
400	30	6	DCPES	83FRA 01	17.8			ITNA	78CAP 01
400	50		PAA	79CHA 02	17.97	0.42		ITNA	86CHI 01
400	100		PAA	74LUT 01	17.97	0.6		RTNA	75LIE 01
400	300	11	ICPES	82JON 01	17.97	0.6		RTNA	77LIE 01
420	140	34	CPXRF	78JOL 01	18			ITNA	77OSB 01
430	130		ICPES	82EVA 01	18	0.3		RTNA	79WAR 02
450	30		FAA	80LEG 01	18	0.8		ITNA	79SAT 01
460	130		FAA	74GRO 01	18	1		CPXRF	77WIL 02
480	50	6	DCPES	83FRA 01	18.1	0.6		14NAA	81WIL 01
490		6	FAA	82KOI 01	18.4	0.4		EXRF	79GIA 01
490		6	FAA	81HIN 01	18.4	0.7		ITNA	86GRE 01
500			OES	75BOL 02	18.4	2		ITNA	81KRI 01
500		6	FAA	82KOI 01	18.5	0.4		ITNA	74LIN 01
500		6	FAA	81HIN 01	18.62	0.95		NAA	76GUZ 01
520		17	UU	74MAS 01	18.64	0.58		IENA	86CHI 01
530			ICPES	85NAR 02	18.7		17	UU	74MAS 01
3900	1000		CPXRF	77WIL 02	18.7	0.2		ITNA	80LAK 01
5000			14NAA	81WIL 01	18.7	0.5		ITNA	78FUR 01
43000	4000		FAA	79WES 01	18.7	0.9	5	ITNA	80TOU 01
					18.7	1		ITNA	73COR 01
					18.7	1.5		ITNA	79CHA 02
					18.7	3.6		EXRF	77NIE 01
					18.8	0.85		ITNA	84ALK 01
4	3	L	RTNA	82LAU 01	18.8	1.3		RTNA	76GAU 01
4			RTNA	77LAU 02	18.8	1.4		ITNA	79LAK 01
4	2		RTNA	86TSU 01	18.8	1.9		CPXRF	84BIS 01
4.6	0.3		RTNA	76GAU 01	18.8	0.8		FAA	83GRO 02
					18.9	1.65		PAA	76KAT 04
					18.95			ITNA	80CRE 01
					19			ITNA	80CRE 01
					19	1		RTNA	77MEL 01
					19	1.6		ITNA	78BEH 01
					19	1.6		ITNA	77JUR 02
					19	2.5		ITNA	77HAM 01
					19.1	0.8		CPXRF	85CLA 01
9.9	1.6		CPXRF	80MAE 01	19.2	1.4		ITNA	80MAE 01
13.2		11	SSMS	85VOS 01	19.3	2.8		CPXRF	79MAN 01
15	2		14NAA	81WIL 02	19.5	2.1		ITNA	79ZEI 01
15	2.5	34	CPXRF	78JOL 01	19.8	1.4	6	ITNA	74BEC 01
15.1	4.4		XRF	77SMI 04	19.9		17	UU	74MAS 01
16.5	1.2	5	ITNA	80TOU 01	20		11	SSMS	85VOS 01
16.6	2.8		RTNA	74SCH 03	20	2.4		CPXRF	80KIR 01
16.7			CPXRF	84KAU 01	20	3		CPXRF	78VIS 01

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Rb (ug/g) cont.</u>					<u>Sb (ng/g) cont.</u>				
20.1			ITNA	73NAD 01	50			ITNA	79KUC 01
20.9	2.5	6	CPXRF	77WIL 03	55	9	6	ITNA	74BEC 01
21.2	0.55		AA	85EVA 01	69	24	6	ITNA	74BEC 01
23.3		17	UU	74MAS 01	70		1	ITNA	79KUC 01
23.4		17	UU	74MAS 01	130	170	RD	ITNA	79IMA 03
28			CPXRF	76ZEI 01	130	170	R	ITNA	79IMA 01
28		17	UU	74MAS 01	300	200		ICPES	83OLI 01
29	4		CPAA	78MCG 01					
<u>S (ug/g)</u>					<u>Sc (ng/g)</u>				
3300	1000		CPXRF	79REN 02	<	0.5	L	RTNA	75LIE 01
6300	2100		NM	83LI 01	<	0.5	L	RTNA	77LIE 01
7200	200		TCGS	79FAI 01	<	1	L	RTNA	80SLO 01
7200	400		TCGS	77JUR 01	<	1		RTNA	75STE 02
7353	81		ICPES	84PRI 01	<	1	L	NAA	78GAN 01
7410	110		ICPES	84MOR 01	<	4	L	ITNA	78CAP 01
7440			CPXRF	84KAU 01	<	800	L	14NAA	81WIL 02
8150	80		CB	86BOW 01	0.4		17	UU	74MAS 01
8550	150		WXRF	86BOW 01	0.6	0.1		RTNA	74HEN 01
8800	273		WXRF	84ALK 01	1			ITNA	73NAD 01
9300	100		ICPES	85WHI 02	1	0.9		RTNA	76GAU 01
9500	700		CPXRF	80KIR 01	1.1			ITNA	84GLA 11
16200	2000		ITNA	79CHA 02	1.1	0.1		RTNA	79WAR 02
					1.1	0.3		ITNA	78BEH 01
					1.2	0.2		ITNA	80MIC 01
					20	6		RTNA	77MEL 01
<u>Sb (ng/g)</u>					<u>Se (ug/g)</u>				
4			RTNA	79MAY 01	0.228	0.011		FLUOR	74IHN 02
4			RTNA	75LIE 01	0.4	0.27		FAA	81MEY 01
4	1		RTNA	30SLO 01	0.69	0.06		NAA	78GAN 01
4.8	0.5		RTNA	77LIE 01	0.75			FAA	74IHN 01
4.8	1.2		RTNA	79ROS 02	0.76		7	ICPES	84MIA 01
5			HAA	79EVA 01	0.774			HAA	77IHN 01
5	2		RTNA	79HOE 01	0.8			CPXRF	84KAU 01
5.7	0.5		ITNA	86GRE 01	0.9		11	FAA	82VER 03
7	5		ITNA	78BEH 01	0.91			FLUOR	78EGA 01
9	3		RTNA	74HEN 01	0.92	0.04		HAA	82SUB 01
10	2		RTNA	78GAL 01	0.92	0.18	6	ITNA	74BEC 01
10	3		ITNA	80MIC 01	0.95	0.03		HAA	78EGA 01
11	9		RTNA	74SCH 03	0.97	0.03		ICPES	80HAA 01
12			ITNA	80CRE 01	0.972			FLUOR	79TAM 01
12	2	7	RTNA	80GAL 02	0.98	0.01		HAA	76FIO 01
14	5		NAA	78GAN 01	0.98	0.03		DCPES	81CAR 02
14	10		ITNA	77ZIK 01	0.98	0.03		GCMES	74TAL 02
15	4		RTNA	77TJI 01	0.98	0.05		ITNA	76DIK 01
16	2		ITNA	79CHA 02	0.98	0.06		AA	79PAV 02
16	7		ITNA	73COR 01	0.98	0.15	34	CPXRF	78JOL 01
18		17	UU	74MAS 01	1.00			HAA	78WEL 01
22.9		17	UU	74MAS 01	1.00		11	FAA	82VER 03
26	1		RTNA	79WAR 02					
34			ITNA	73NAD 01					

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Se (ug/g) cont.</u>					<u>Se (ug/g) cont.</u>				
1.00		17	UU	74MAS 01	1.07	0.11		ITNA	78HIR 01
1.00	0.01		ITNA	79SAT 01	1.07	0.18		RTNA	79PLA 01
1.00	0.02		FAA	761HN 02	1.07	0.19		RTNA	79ROS 02
1.00	0.04		FAA	761HN 01	1.08	0.01		CSV	83ADE 01
1.00	0.1		RTNA	75ABU 01	1.08	0.01		ITNA	74LIN 01
1.00	0.1	11	AA	85BYE 01	1.08	0.015		FAA	80NEV 01
1.00	0.1	11	HAA	82JON 01	1.08	0.05		ASV	76AND 01
1.00	0.1		ICPES	83OLI 01	1.08	0.08		AA	84MAT 01
1.00	0.2		CPXRF	80MAE 01	1.08	0.12		ITNA	77GUI 02
1.00	0.4		CPXRF	78VIS 01	1.08	0.13	6	ITNA	74BEC 01
1.01	0.04		ITNA	79CHA 04	1.08	0.2		FAA	79RAI 01
1.01	0.06		ITNA	84ALK 01	1.09	0.01		ASV	83ADE 01
1.02		11	HAA	85PIW 01	1.09	0.02		AA	79FLA 02
1.02			ITNA	81HAN 01	1.09	0.02	34	HAA	78FLA 01
1.02		7	ICPES	84MIA 01	1.09	0.04		ITNA	86GRE 01
1.02		17	UU	74MAS 01	1.09	0.05		RTNA	74ORV 01
1.02			ITNA	81MEY 01	1.09	0.06		HAA	81HAN 01
1.02	0.03		RTNA	77LIE 01	1.09	0.08		RTNA	79WAR 02
1.02	0.03		RTNA	75LIE 01	1.1			FAA	77YAS 01
1.02	0.03	9	ITNA	81SUZ 01	1.1			ITNA	80CRE 01
1.02	0.04		HAA	80AGE 02	1.1			ITNA	77OSB 01
1.02	0.06		IENA	86CHI 01	1.1			ITNA	78CAP 01
1.02	0.438	5	RTNA	82TIN 01	1.1		11	FAA	82VER 03
1.03		6	FAA	77SHU 01	1.1	0.02		XRF	81KNA 01
1.03	0.03		RTNA	77RAI 01	1.1	0.05	11	GC	81UCH 02
1.03	0.03		ITNA	79RAI 01	1.1	0.06	11	GC	81UCH 02
1.03	0.04	11	HAA	82JON 01	1.1	0.06		FLUOR	80KOH 01
1.03	0.05		ITNA	80MIC 01	1.1	0.1		GC	77POO 01
1.03	0.09		ITNA	81MOL 01	1.1	0.1	9	ITNA	80WAN 01
1.04			FLUOR	74IHN 01	1.1	0.13	11	RTNA	82POL 01
1.04	0.03		ITNA	86CHI 01	1.1	0.17	9	ITNA	77VOB 01
1.04	0.07		ITNA	74WES 01	1.1	0.17	9	ITNA	79PAV 02
1.04	0.1		RTNA	80KNA 01	1.1	0.17	9	ITNA	77VOB 01
1.045	0.04		ITNA	77EGA 01	1.1	0.2		EXRF	79GIA 01
1.05		6	FAA	77SHU 01	1.1	0.2		HAA	82MAY 01
1.05		7	ICPES	84MIA 01	1.1	0.3		ITNA	79ZEI 01
1.05	0.05		HAA	80VIJ 01	1.1	0.4	5	ITNA	80TOU 01
1.05	0.12		RTNA	80SLO 01	1.107	0.15		NAA	76GUZ 01
1.05	0.19		ITNA	79LAK 01	1.11	0.02		SSMS	77PAU 01
1.053	0.051		COLOR	79SZY 02	1.11	0.03		FAA	82JUL 01
1.06			FAA	78CAP 01	1.11	0.04		SSMS	77ROO 02
1.06	0.06		RTNA	78GAL 01	1.11	0.05		RTNA	74BYR 03
1.06	0.06	7	RTNA	80GAL 02	1.11	0.06		HAA	761HN 02
1.06	0.1		RTNA	77TJI 01	1.11	0.08	13	ITNA	73BLO 02
1.06	0.11	11	RTNA	82POL 01	1.11	0.09	12	FAA	84RIN 01
1.069	0.016		ITNA	82DAM 01	1.11	0.1		ITNA	79CHA 02
1.07			RTNA	75STE 02	1.12	0.02		FLUOR	84ALF 01
1.07	0.02		AA	83RAP 01	1.12	0.03		ASV	75AND 01
1.07	0.04		GC-MS	81REA 02	1.12	0.075		HAA	81MEY 01
1.07	0.06	5	ITNA	81SUZ 01	1.12	0.08	11	RTNA	82POL 01
1.07	0.1		RTNA	79MAY 01	1.12	0.08		RTNA	72ROO 03

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Se (ug/g) cont.</u>					<u>Se (ug/g) cont.</u>				
1.12	0.08		RTNA	77ROO 02	1.26		17	UU	74MAS 01
1.12	0.09	7	RTNA	81KUC 01	1.26	0.15	5	FLUOR	81SUZ 01
1.12	0.1		ASV	81POS 01	1.28	0.24		CSV	83AHM 02
1.12	0.12	6	FLUOR	75OLS 01	1.3	0.4		RTNA	74SCH 03
1.13		17	UU	74MAS 01	1.4			FAA	82INU 01
1.13	0.03	11	ASV	84ADE 01	1.4	0.1		EXRF	80DYC 01
1.13	0.03		AA	85ADE 02	1.4	0.5	6	CPXRF	77WIL 03
1.13	0.05		ICPES	85NAK 01	1.7			ITNA	73NAD 01
1.13	0.09		ITNA	73COR 01	1.7	0.1		ITNA	78FUR 01
1.133	0.122		ITNA	82MOR 02	2.7			ICPES	85NAR 02
1.14	0.04		ITNA	78MCK 01	7.65	0.277	5	RTNA	82TIN 01
1.14	0.05		ITNA	80MAE 01	13.376	0.926	5	RTNA	82TIN 01
1.14	0.09		HAA	83KOL 01	<u>Se(VI) (ug/g)</u>				
1.14	0.091		HAA	82TAM 01	0.3	0.07		GC	81TOE 01
1.14	0.11		ITNA	77JUR 02	0.31	0.11		COLOR	81TOE 01
1.14	0.11		ITNA	79PAV 02	<u>Si (ug/g)</u>				
1.14	0.11		ITNA	77VOB 01	16.7	0.67		ITNA	75PIE 01
1.14	0.11		ITNA	78BEH 01	16.79	1.84		HAA	76GUZ 01
1.15	0.02		FLUOR	83KOH 01	19		11	SSMS	85VOS 01
1.15	0.04		ITNA	80LAK 01	246			CPXRF	84KAU 01
1.15	0.08	11	ASV	84ADE 01	<u>Sm (ng/g)</u>				
1.16			CSV	81HAN 01	1	0.2		RTNA	74HEN 01
1.16	0.08		FAA	84BAU 01	1.3	0.4		RTNA	80SLO 01
1.16	0.09	12	FAA	84RIN 01	1.5	0.2		RTNA	83TJI 01
1.17	0.06	6	FLUOR	75OLS 01	1.6			RTNA	82LAU 01
1.17	0.18		HAA	82JUL 01	1.6			RTNA	77LAU 02
1.18		11	HAA	85PIW 01	1.9	0.2		RTNA	76GAU 01
1.18	0.14		RTNA	74HEN 01	2	0.2		RTNA	86TSU 01
1.19	0.11	13	ITNA	73BLO 02	2.8			ITNA	80CRE 01
1.2		1	IENA	79KUC 01	35	24		RTNA	74SCH 03
1.2			ITNA	79KUC 01	<u>Sn (ng/g)</u>				
1.2			FAA	77YAS 01	<	240	L	RTNA	81KUC 01
1.2			ICPES	80HAA 01	<	600		RTNA	75LIE 01
1.2		7	RTNA	81KUC 01	<	600	L	RTNA	77LIE 01
1.2	0.1		ITNA	80WAN 01	<	1500	L	ICPES	78CAP 01
1.2	0.1		RTNA	77MEL 01	10			HAA	79EVA 01
1.2	0.1	7	RTNA	80GAL 02	20	3		RTNA	83GRE 02
1.2	0.1		ITNA	81KRI 01	20	6		ITNA	86GRE 01
1.2	0.1		HAA	77GIL 01	21	3		RTNA	77BYR 01
1.2	0.1		RTNA	77GIL 03	220	180		ICPES	80HAA 01
1.2	0.1		CPXRF	77WIL 02					
1.2	0.11		RTNA	77OMI 01					
1.2	0.155		ITNA	77HAM 01					
1.2	0.16		HAA	81REA 01					
1.2	0.2	11	AA	85BYE 01					
1.2	0.2		HAA	81COX 01					
1.204	0.124		HAA	77IHN 03					
1.22	0.04		COLOR	81TOE 01					
1.23		17	UU	74MAS 01					
1.24	0.04		GC	81TOE 01					
1.24	0.3		CPXRF	85CLA 01					

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Sr (ng/g)</u>					<u>Tm (ng/g)</u>				
100		11	SSMS	85VOS 01	<	0.3	L	RTNA	76GAU 01
150	20		RTNA	76GAU 01	0.1			RTNA	82LAU 01
160			ICPES	78DAH 01	0.15			RTNA	77LAU 02
160	20		FAA	82SUZ 03					
300	60		ICPES	79ABE 01	<u>U (ng/g)</u>				
500	180	34	CPXRF	78JOL 01	<	1		DNA	86GAU 01
550	440		AA	85EVA 01	<	20	L	ITNA	74WEA 01
2000	800		14NAA	81WIL 02	<	100	L	RTNA	76GAU 01
					<	2000	L	EXRF	79GIA 01
<u>Ta (ng/g)</u>					0.99	0.25	35	DNA	80GLA 04
3			ITNA	80CRE 01	1	1.6		DNA	84GLA 02
					20	48	R	DNA	81GLA 03
<u>Tb (ng/g)</u>					<u>V (ng/g)</u>				
<	0.2		RTNA	83TJI 01					
<	1.6	L	RTNA	76GAU 01	<	20	L	RTNA	77BUO 01
0.17			RTNA	82LAU 01	<	20	L	ITNA	74HOF 01
0.18			RTNA	77LAU 02	<	40	L	ITNA	74HOF 01
2			ITNA	80CRE 01	15	5		COLOR	82KIR 01
<u>Te (ng/g)</u>					33	3		RTNA	79WAR 02
					55	1		FAA	77MYR 01
90	15		RTNA	77DIK 01	56		17	UU	74MAS 01
					56	7		UU	73STE 01
<u>Th (ng/g)</u>					58.6	1.6		RTNA	78BYR 01
					59			NAA	80KOS 02
<	1000	L	EXRF	79GIA 01	60			ICPES	80HAA 01
3	6	R*	RTNA	80SLO 01	60	2		RTNA	80WOI 01
6.8			ITNA	80CRE 01	60	5		RTNA	79CHA 02
<u>Ti (ug/g)</u>					61.5	2		RTNA	79COR 01
					61.5	2		RTNA	81COR 02
<	0.15	L	ICPES	78CAP 01	65	2		RTNA	82BYR 01
<	3.3		CPXRF	84KAU 01	66.2	4.9		RTNA	78ALL 04
<	4	L	14NAA	81WIL 02	90	60	11	ICPES	82JON 01
<	11	L	EXRF	79GIA 01	320	80		RTNA	77GUI 03
0.7	0.2		COLOR	82KIR 02	370		11	SSMS	85VOS 01
1.7	0.2		ICPES	79ABE 01	400		11	SSMS	85VOS 01
2	1		CPAA	77ZIK 01	460			ITNA	78CAP 01
3.2	1		14NAA	81WIL 01	500	100		ITNA	77ZIK 01
3.8		11	SSMS	85VOS 01	600	100		ICPES	79ABE 01
4.7		11	SSMS	85VOS 01	<u>W (ng/g)</u>				
<u>Tl (ng/g)</u>					3.8			RTNA	84BYR 01
					5		17	UU	74MAS 01
<	2	11	ASV	84LIE 01	5	3		RTNA	74SCH 03
<	2	11	ASV	84LIE 01	12			RTNA	76GAU 01
2		11	ASV	84LIE 01	15			RTNA	75STE 02
48	3		SSMS	77PAU 01	30		17	UU	74MAS 01
					700	100		RTNA	80SLO 01

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Y (ug/g)</u>					<u>Zn (ug/g) cont.</u>				
<	1	L	EXRF	79GIA 01	123.8	1.2		FAA	74GRO 01
<	14	L	14NAA	81WIL 01	124		17	UU	74MAS 01
<u>Yb (ng/g)</u>					124		6	POL	72SIN 01
					124			ITNA	78CAP 01
					124	7	7	AA	73TAL 01
<	0.1		RTNA	83TJI 01	124	7		FAA	74TAL 01
0.28			RTNA	82LAU 01	124	7.3	11	RTNA	74WES 01
0.285			RTNA	77LAU 02	124	10	D	ICPES	80SCH 08
0.48	0.09		RTNA	76GAU 01	124	10		ICPES	80SCH 05
830			ITNA	73NAD 01	124	14		CPXRF	79MAN 01
<u>Zn (ug/g)</u>					124.4			RTNA	75HAL 01
					125			ITNA	79KUC 01
					125			RTNA	75STE 02
13.17	17.59	R	AA	79MON 01	125	2		AA	79FLA 02
32			ASV	74COP 01	125	5	7	RTNA	80GAL 02
65	15		FAA	77FUJ 01	125	5		RTNA	77GIL 03
78	25		14NAA	81WIL 01	125	5		NAA	77GIL 01
93	17	12	FAA	85CAR 02	125	6		AA	83RAP 01
98	122	RD	ITNA	79IMA 03	125	16		ITNA	77HAM 01
98	122	R	ITNA	79IMA 01	125.7	10.6	34	CPXRF	78JOL 01
101		17	UU	74MAS 01	126			FAA	75SLA 01
102			FAA	83ATS 01	126	2		ITNA	80MAE 01
104			CPXRF	78UEM 01	126	4	7	AA	73TAL 01
106	31	12	FAA	85CAR 02	126	4		FAA	74TAL 01
112			XRF	80SUZ 02	126	4		SSMS	77PAU 01
112	15		ICPES	81BLA 01	126	5		ITNA	81MOL 01
112.6	1.1		FAA	81CLE 02	126	8		FAA	79WAR 01
113	5		FAA	84ROS 01	126	9		RTNA	74ORV 01
116			ITNA	73NAD 01	126	71		ITNA	82KIM 01
116	18		CPXRF	80MAE 01	127		11	FAA	81DAN 01
117	13		AA	79MAN 01	127		1	IENA	79KUC 01
117.2	10		RTNA	83DAN 01	127	1		RTNA	80SLO 01
118		11	ASV	81DAN 01	127	4		AA	80UCH 01
118	4	6	POL	72SIN 01	127	8	11	RTNA	74WES 01
118	21		RTNA	82KIM 01	127	9		ITNA	81KRI 01
118.2	7.8		IENA	75MAZ 01	127.9	9.1	6	ITNA	74BEC 01
119		6	POL	72SIN 01	128			DCPES	78NAK 01
120		17	UU	74MAS 01	128		7	RTNA	81KUC 01
120	6	11	ICPES	81BLA 02	128	3		FAA	81CLE 01
120	12		FAA	84HAR 02	128	3.6	11	AA	74WES 01
121	10	7	RTNA	84FAR 02	128	5		ITNA	79SAT 01
121	13		ICPES	85FAS 01	128	6		AA	75HIN 01
121.9			RTNA	74RAV 01	128	7		RTNA	79DER 01
122		11	FAA	81DAN 01	128	10		CPXRF	80KIR 01
122	3		NAA	78GAN 01	128	12		ITNA	79CHA 02
122	3		EXRF	80DYC 01	128	14		EXRF	77NIE 01
122	9		ITNA	79LAK 01	128	14		CPAA	77ZIK 01
123	5		ITNA	74WES 01	128	26		ICPES	82AZI 02
123	8	7	RTNA	84FAR 02	128.6			AA	79LOC 01
123	25		ITNA	78FJR 01	128.6	0.7		ITNA	82DAM 01
123	26		ICPES	84BLA 01	129			ICPES	80HAA 01

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Zn (ug/g) cont.</u>					<u>Zn (ug/g) cont.</u>				
129			ICPES	84NAD 01	134	2		EXRF	79GIA 01
129		1	IENA	79KUC 01	134	3		AA	79WAR 01
129			ITNA	80CRE 01	134	4	1	AA	77UCH 02
129	1.5		ITNA	86CHI 01	134	5	7	AE+AF	73TAL 01
129	3		ITNA	74DOM 01	134	5		FAE	74TAL 01
129	4		RTNA	79WAR 02	134	5		RTNA	77TJI 01
129	4		ITNA	79WAR 01	134	6	11	ICPES	82JON 01
129	8		ITNA	80LAK 01	134	7	11	ICPES	82JON 01
129	16	32	CPXRF	77CRO 01	134	7.2		RTNA	79PLA 01
129.2	6		ITNA	84ALK 01	134	10	7	AE+AF	73TAL 01
130			OES	75BOL 02	134	10		FAE	74TAL 01
130		11	AA	81MOH 01	135		17	UU	74MAS 01
130	4	11	ICPES	81BLA 02	135			AE+AF	79ULL 01
130	4.5		AA	84HUD 01	135			ICPES	78CAP 01
130	4.5	D	AA	84HUD 03	135	1		ITNA	74LIN 01
130	5	1	ICPES	78SUD 01	135	2	11	ICPES	82JON 01
130	7		CPXRF	78VIS 01	135	2		ICPES	85WOL 01
130	13		FAA	80LON 01	135	4	11	ICPES	82JON 01
130	22		AA	82HAR 01	135	5		CPXRF	85CLA 01
131			AF	85NAR 02	135	5		RTNA	75LIE 01
131		14	FAA	80CHA 08	135	5		RTNA	77LIE 01
131		17	UU	74MAS 01	135	6		IENA	86CHI 01
131	1		AA	75ABU 01	135	7		AA	84CUB 01
131	1		AA	75EPS 01	136		11	XRF	83PEL 01
131	1		ICPES	79MCQ 02	136		17	UU	74MAS 01
131	1.4		AA	80AGE 01	136	1.8	6	DCPES	83FRA 01
131	2		ICPES	79MCQ 01	136	3		HPLC	85SAI 01
131	4		ITNA	80MIC 01	136	6		RTNA	76GAU 01
131	13.5		PAA	76KAT 04	136	9		RTNA	74HEN 01
131	37		EXRF	84KNA 01	137	2		ASV	85ADE 01
131.8	6.5		ITNA	73COR 01	137	4		ITNA	74GUI 01
132	1		AF	75EPS 01	137	9	5	ITNA	80TOU 01
132	3		GC	81BLA 01	137.2	5.75		NAA	76GUZ 01
132	3.3	6	CPXRF	77WIL 03	138	3		ITNA	86GRE 01
132	5		AA	79MCQ 01	139		17	UU	74MAS 01
132	6	7	RTNA	81KUC 01	139		11	SSMS	85VOS 01
132	7	1	AA	77UCH 02	139	5		ICPES	82EVA 01
132	7		AA	80IID 01	140			ITNA	77OSB 01
132	10		CPXRF	81SAI 01	140		11	AA	81MOH 01
132	15		ICPES	83SCH 04	140			ICPES	78DAH 01
133		11	ASV	81DAN 01	140	2.4	6	DCPES	83FRA 01
133			CPXRF	84KAU 01	140	16		RTNA	77KUS 01
133		14	FAA	80CHA 08	140	29		XRF	77SMI 04
133	4	7	RTNA	84FAR 02	141	2	D	DCPES	81REE 01
133	6		ICPES	78JAC 01	141	2		DCPES	79REE 01
133	7		ITNA	77JUR 02	141	16	5	RTNA	74SCH 03
133	7		ITNA	78BEH 01	141.7	5.3	6	ITNA	74BEC 01
133.9	6.8		ITNA	79ZEI 01	142			AA	80EVA 01
134			ICPES	85NAR 02	142	4		AA	82EVA 01
134		17	UU	74MAS 01	142	11		ITNA	77ZIK 01
134	2		RTNA	77MEL 01	143	19		ICPES	79ABE 01

TABLE 1577-2: INDIVIDUAL DATA FOR NBS SRM 1577 (cont.)

Conc	Uncer	Com	Method	Reference
<u>Zn (ug/g) cont.</u>				
144	12	6	CPXRF	77WIL 03
144	17		CPXRF	84BIS 01
145			FAA	78CAP 01
145		11	SSMS	85VOS 01
145	5		CPXRF	77WIL 02
145.5			ITNA	82AKA 01
146	12		ICPES	82AZI 01
147	7.3	11	AA	74WES 01
148	15		CPAA	78MCG 01
148	74		CPXRF	76ZEI 01
150	10		PAA	76WIL 01
153	2		ICPES	85WHI 02
156	6.2		CPXRF	81ROB 02
157	20	1	ICPES	78SUD 01
159	8	5	RTNA	74SCH 03
160		17	UU	74MAS 01
160		17	UU	74MAS 01
162	31	32	CPXRF	77CRO 01
200	40		14NAA	81WIL 02
<u>Zr (ug/g)</u>				
<	0.5	L	14NAA	81WIL 02
<	3	L	14NAA	81WIL 01
<	3	I	EXRF	79GIA 01
0.09	0.08		PAA	84SAT 01
1.6		11	SSMS	85VOS 01
3.4	0.4		PAA	79CHA 02
4	3		CPAA	77ZIK 01

TABLE 1577A-1: COMPILED DATA FOR NBS SRM 1577A BOVINE LIVER (revised 3/1/86)

ELEMENT	UNITS	NBS		CONSENSUS		MEDIAN	RANGE	AA		NAA		XRF	OTHER METHODS	
		Mean \pm SD	(n)	Mean \pm SD	(n)			Mean \pm SD	(n)	Mean \pm SD	(n)		Mean \pm SD	(n) Method
Ag	ng/g	40 \pm 10	---	---	---	---	---	---	---	---	---	---	---	---
Al	ug/g	2	---	3.4 (1)	---	---	---	---	---	3.4 (1)	---	---	---	---
As	ng/g	47 \pm 6	---	48 \pm 8 (3)	---	49	40 - 56	40 (1)	---	52.5 (2)	---	---	---	---
Br	ug/g	9	---	9.6 \pm 1.3 (4)	---	9	8.5 - 11.2	---	---	9.6 \pm 1.2 (4)	---	---	---	---
Ca	ug/g	120 \pm 7	---	121 \pm 5 (26)	---	123	111.3 - 129.7	121 \pm 5 (25)	---	---	127 (1)	---	145 (1)	ICPMS
Cd	ng/g	440 \pm 60	---	455 (2)	---	---	440 - 470	470 (1)	---	440 (1)	---	---	---	---
Cl	ug/g	2800 \pm 100	---	2700 \pm 110 (4)	---	2650	2570 - 2800	---	---	2700 \pm 110 (4)	---	---	---	---
Co	ng/g	210 \pm 50	---	249 (2)	---	---	244 - 254	---	---	249 (2)	---	---	---	---
Cr	ug/g	---	---	1.0 (1)	---	---	---	---	---	1.0 (1)	---	---	---	---
Cu	ug/g	158 \pm 7	---	149 \pm 14 (30)	---	153.6	114.2 - 164	149 \pm 14 (24)	---	155 \pm 12 (3)	145 (2)	---	160 (1)	ICPMS
Fe	ug/g	194 \pm 20	---	155 \pm 17 (25)	---	155.9	116.1 - 181	153 \pm 16 (22)	---	181 (1)	163.5 (2)	---	---	---
Hg	ng/g	4 \pm 2	---	3.15 (2)	---	---	3 - 3.3	---	---	3.15 (2)	---	---	---	---
I	ng/g	---	---	243 (2)	---	---	240 - 246	---	---	243 (2)	---	---	---	---
K	%	0.996 \pm 0.007	---	1.00 \pm 0.13 (3)	---	0.95	0.894 - 1.15	---	---	1.05 (2)	---	---	0.894 (1)	ICPMS
Mg	ug/g	600 \pm 15	---	612 \pm 36 (3)	---	624	571 - 640	---	---	606 (2)	---	---	624 (1)	ICPMS
Mn	ug/g	9.9 \pm 0.8	---	9.9 \pm 0.4 (34)	---	9.8	9.1 - 10.8	9.9 \pm 0.4 (29)	---	9.7 \pm 0.6 (3)	10.5 (1)	---	9.1 (1)	ICPMS
Mo	ug/g	3.5 \pm 0.5	---	3.43 (2)	---	---	3.4 - 3.47	---	---	3.44 (2)	---	---	---	---
N	%	10.7	---	---	---	---	---	---	---	---	---	---	---	---
Na	ug/g	2430 \pm 130	---	2410 \pm 220 (3)	---	2450	2170 - 2600	---	---	2525 (2)	---	---	2170 (1)	ICPMS
P	%	1.11 \pm 0.04	---	1.18 (1)	---	---	---	---	---	---	---	---	1.18 (1)	ICPMS
Pb	ng/g	135 \pm 15	---	168 \pm 29 (4)	---	150	150 - 210	150 (1)	---	---	---	---	170 \pm 30 (3)	DCPES
Rb	ug/g	12.5 \pm 0.1	---	12.2 (1)	---	---	---	---	---	12.2 (1)	---	---	---	---
S	ug/g	7800 \pm 100	---	8300 \pm 500 (4)	---	7900	7845 - 8860	---	---	---	8860 (1)	---	7845 (1)	IDMS
S	ug/g	---	---	---	---	---	---	---	---	---	---	---	7900 (1)	ICPMS
S	ug/g	---	---	---	---	---	---	---	---	---	---	---	8550 (1)	CB
S-32/34	ratio	---	---	22.555 (1)	---	---	---	---	---	---	---	---	22.555 (1)	IDMS
S-33/34	ratio	---	---	0.1776 (1)	---	---	---	---	---	---	---	---	0.1776 (1)	IDMS
Sb	ng/g	3	---	31 (1)	---	---	---	---	---	31 (1)	---	---	---	---
Sc	ng/g	---	---	0.8 (1)	---	---	---	---	---	0.8 (1)	---	---	---	---
Se	ng/g	710 \pm 70	---	780 \pm 200 (5)	---	779	580 - 1100	875 (2)	---	685 (2)	779 (1)	---	---	---
Sr	ng/g	138 \pm 3	---	---	---	---	---	---	---	---	---	---	---	---
Tl	ng/g	3	---	---	---	---	---	---	---	---	---	---	---	---
U	ng/g	0.71 \pm 0.03	---	0.704 (1)	---	---	---	---	---	< 1	---	---	0.704 (1)	IDMS
V	ng/g	99 \pm 8	---	97 (2)	---	---	96 - 98.7	---	---	96 (1)	---	---	98.7 (1)	IDMS
Zn	ug/g	123 \pm 8	---	122 \pm 4 (27)	---	122.8	111.6 - 130.1	122 \pm 4 (25)	---	127 (1)	126 (1)	---	---	---

TABLE 1577A-2: INDIVIDUAL DATA FOR NBS SRM 1577A (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Al (ug/g)</u>					<u>Cd (ng/g)</u>				
3.4	0.8		ITNA	84GLA 11	440	10		RTNA	84BYR 02
					470	10		FAA	85SAL 01
<u>As (ng/g)</u>					<u>Cl (ug/g)</u>				
40	10		HAA	85SAL 01	2570			ITNA	85GAU 04
49	4		RTNA	85GAU 04	2650	300		IENA	84GLA 11
56	3		RTNA	84BYR 02	2780	150		ITNA	84GLA 11
<u>Br (ug/g)</u>					2800	100		ITNA	86KRA 01
8.5	1		IENA	84GLA 11	<u>Co (ng/g)</u>				
9	0.9		ITNA	84GLA 11	244	12		ITNA	86KRA 01
9.7			ITNA	85GAU 04	254	21		RTNA	84BYR 02
11.2			IENA	85GAU 04	<u>Cr (ug/g)</u>				
<u>Ca (ug/g)</u>					1	0.3		ITNA	86KRA 01
25	1.1	11	AA	84IMA 02	<u>Cu (ug/g)</u>				
26.1	1.4	11	AA	84IMA 02	62.3		11	AA	84IMA 02
111.3		11	AA	84IMA 02	73.7		11	AA	84IMA 02
112.9		11	AA	84IMA 02	100.5	2.4	11	AA	84IMA 02
113.2	2.6	11	AA	84IMA 02	108.9		11	AA	84IMA 02
113.5		11	AA	84IMA 02	114.2		11	AA	84IMA 02
115.7	3.5	11	AA	84IMA 02	126	0.5	11	AA	84IMA 02
116.2		11	AA	84IMA 02	129.2	2.7	11	AA	84IMA 02
117.3	10.3	11	AA	84IMA 02	129.4	7.2	11	AA	84IMA 02
117.6		11	AA	84IMA 02	131		11	XRF	83PEL 01
117.7	27.9	11	AA	84IMA 02	136.1	4.1	11	AA	84IMA 02
118.6		11	AA	84IMA 02	136.6	2.2	11	AA	84IMA 02
120.7		11	AA	84IMA 02	137.2		11	AA	84IMA 02
121.3		11	AA	84IMA 02	141	5		RTNA	84BYR 02
122.2	3.3	11	AA	84IMA 02	142.9		11	AA	84IMA 02
123		11	AA	84IMA 02	149.1	4.9	11	AA	84IMA 02
124.1	8.4	11	AA	84IMA 02	149.9	4.2	11	AA	84IMA 02
124.1	9.1	11	AA	84IMA 02	151.4	12.7	11	AA	84IMA 02
124.1	9.2	11	AA	84IMA 02	153.6		11	AA	84IMA 02
124.7		11	AA	84IMA 02	153.6	8.3	11	AA	84IMA 02
124.9		11	AA	84IMA 02	154.8		11	AA	84IMA 02
125	0.2	11	AA	84IMA 02	156	4		AA	85SAL 01
126.5	9.1	11	AA	84IMA 02	157.6	1.2	11	AA	84IMA 02
126.5	9.1	11	AA	84IMA 02	159		11	XRF	83PEL 01
127	9		CPXRF	85SIM 01	159	6		ITNA	84GLA 11
127.6	12	11	AA	84IMA 02	159.1		11	AA	84IMA 02
129.3	1.4	11	AA	84IMA 02	159.1	5.5	11	AA	84IMA 02
129.7	13.2	11	AA	84IMA 02	160	0.6		ICPMS	86SCI 01
145	3		ICPMS	86SCI 01	160.4		11	AA	84IMA 02
160	60		ITNA	84GLA 11	160.7	9.3	11	AA	84IMA 02

TABLE 1577A-2: INDIVIDUAL DATA FOR NBS SRM 1577A (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Cu (ug/g) cont.</u>					<u>K (%)</u>				
162.7	6.5	11	AA	84IMA 02	0.894	0.03		ICPMS	86SCI 01
162.7	6.5	11	AA	84IMA 02	0.95	0.02		ITNA	84GLA 11
163.1	3.2	11	AA	84IMA 02	1.15	0.17		ITNA	86KRA 01
163.6		11	AA	84IMA 02					
164	10		ITNA	86KRA 01	<u>Mg (ug/g)</u>				
<u>Fe (ug/g)</u>					571	57		ITNA	86KRA 01
67.2	9.2	11	AA	84IMA 02	624	2		ICPMS	86SCI 01
82.1	3.8	11	AA	84IMA 02	640	30		ITNA	84GLA 11
95.8		11	AA	84IMA 02	<u>Mn (ug/g)</u>				
105.9		11	AA	84IMA 02	8.4		11	AA	84IMA 02
116.1		11	AA	84IMA 02	9.1		11	AA	84IMA 02
119.8	1.6	11	AA	84IMA 02	9.1	0.08		ICPMS	86SCI 01
135.1		11	AA	84IMA 02	9.1	0.4		RTNA	84BYR 02
136.9	8.6	11	AA	84IMA 02	9.1	0.8	11	AA	84IMA 02
140		11	AA	84IMA 02	9.4		11	AA	84IMA 02
147		11	AA	84IMA 02	9.5		11	AA	84IMA 02
147.8	7.4	11	AA	84IMA 02	9.5	0.6	11	AA	84IMA 02
148.3	3.5	11	AA	84IMA 02	9.5	0.6	11	AA	84IMA 02
149		11	XRF	83PEL 01	9.58	0.38	6	FAA	85DOU 01
149.7	10.8	11	AA	84IMA 02	9.7		11	AA	84IMA 02
155.8		11	AA	84IMA 02	9.7	0.2	11	AA	84IMA 02
155.9	5.4	11	AA	84IMA 02	9.7	0.3	11	AA	84IMA 02
156.2	5.7	11	AA	84IMA 02	9.8		11	AA	84IMA 02
156.7	5.4	11	AA	84IMA 02	9.8		11	AA	84IMA 02
160.2	9.4	11	AA	84IMA 02	9.8		11	AA	84IMA 02
162.6		11	AA	84IMA 02	9.8		11	AA	84IMA 02
164.1	6.7	11	AA	84IMA 02	9.8		11	AA	84IMA 02
168.2		11	AA	84IMA 02	9.8	0.4		ITNA	86KRA 01
168.3	4.4	11	AA	84IMA 02	9.8	0.4	11	AA	84IMA 02
170.9		11	AA	84IMA 02	9.9	0.3	11	AA	84IMA 02
170.9	9.8	11	AA	84IMA 02	9.9	0.3	11	AA	84IMA 02
170.9	9.8	11	AA	84IMA 02	9.9	0.4	11	AA	84IMA 02
172.4		11	AA	84IMA 02	10.1	0.1	11	AA	84IMA 02
178		11	XRF	83PEL 01	10.1	0.3	11	AA	84IMA 02
181	28		ITNA	86KRA 01	10.1	0.7	11	AA	84IMA 02
202	2		ICPMS	86SCI 01	10.2	0.1	11	AA	84IMA 02
204.1	49	11	AA	84IMA 02	10.2	0.7	6	FAA	85DOU 01
<u>Hg (ng/g)</u>					10.3		11	AA	84IMA 02
					10.3	0.5		ITNA	84GLA 11
					10.3	1	6	FAA	85DOU 01
<	10		CVAA	85SAL 01	10.4	0.6	11	AA	84IMA 02
3	0.2		RTNA	84DEL 01	10.5		11	XRF	83PEL 01
3.3	0.5		RTNA	84BYR 02	10.5		11	AA	84IMA 02
<u>I (ng/g)</u>					10.7	0.2	11	AA	84IMA 02
					10.8	0.4	11	AA	84IMA 02
<	400		ITNA	84GLA 11					
240	30		ITNA	84GLA 11					
246	11		RTNA	84BYR 02					

TABLE 1577A-2: INDIVIDUAL DATA FOR NBS SRM 1577A (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Mo (ug/g)</u>					<u>Se (ng/g)</u>				
3.4	1.2		ITNA	86KRA 01	580	90		RTNA	84BYR 02
3.47	0.01		RTNA	84BYR 02	650	40		HAA	85SAL 01
<u>Na (ug/g)</u>					779	34		CPXRF	84BUS 01
2170	70		ICPMS	86SCI 01	790	180		ITNA	86KRA 01
2450	30		ITNA	86KRA 01	1100	100		HAA	85CUT 01
2600	200		ITNA	84GLA 11	<u>U (ng/g)</u>				
<u>P (%)</u>					<	1		DNA	86GAU 01
1.18	0.005		ICPMS	86SCI 01	0.704	0.012		IDMS	83KEL 01
<u>Pb (ng/g)</u>					<u>V (ng/g)</u>				
150		6	DCPES	84SNE 01	96	4		RTNA	84BYR 02
150	10		FAA	85SAL 01	98.7	1.6		IDMS	85FAS 02
160		6	DCPES	84SNE 01	<u>Zn (ug/g)</u>				
210		6	DCPES	84SNE 01	109.6		11	AA	84IMA 02
<u>Rb (ug/g)</u>					109.6		11	AA	84IMA 02
12.2	0.7		ITNA	86KRA 01	111.6		11	AA	84IMA 02
<u>S (ug/g)</u>					115.4	8.1	11	AA	84IMA 02
7845	46		IDMS	84KEL 01	116.4		11	AA	84IMA 02
7900	200		ICPMS	86SCI 01	117	4.4	11	AA	84IMA 02
8550	70		CB	86BOW 01	117.9		11	AA	84IMA 02
8860	170		WXRF	86BOW 01	118		11	AA	84IMA 02
<u>S-32/34 (ratio)</u>					119	3.3	11	AA	84IMA 02
22.555			IDMS	84KEL 01	120	5.2	11	AA	84IMA 02
<u>S-33/34 (ratio)</u>					120.9		11	AA	84IMA 02
0.1776			IDMS	84KEL 01	122	2		AA	85SAL 01
<u>Sb (ng/g)</u>					122.8	6	11	AA	84IMA 02
31	1		RTNA	84BYR 02	122.8	6	11	AA	84IMA 02
<u>Sc (ng/g)</u>					122.8	10.9	11	AA	84IMA 02
0.8			ITNA	84GLA 11	122.9		11	AA	84IMA 02
					123.9	1.3	11	AA	84IMA 02
					124.1	1.7	11	AA	84IMA 02
					124.5	2.3	11	AA	84IMA 02
					125.3	2.2	11	AA	84IMA 02
					125.5	3.5	11	AA	84IMA 02
					126		11	XRF	83PEL 01
					126.1		11	AA	84IMA 02
					126.4	2.6	11	AA	84IMA 02
					126.8	1.5	11	AA	84IMA 02
					126.9	9.7	11	AA	84IMA 02
					127	3		ITNA	86KRA 01
					127.5		11	AA	84IMA 02
					130.1	2.1	11	AA	84IMA 02

TABLE 1580-1: COMPILED DATA FOR NBS SRM 1580 ORGANICS IN SHALE OIL (revised 3/1/86)

COMPOUND	CAS #	UNITS	NBS	
			Mean ±	SD
Benzo[a]pyrene	50328	ug/g	21 ± 6	
Benzo[e]pyrene	192972	ug/g	18 ± 8	
Benzo[f]quinoline	85029	ug/g	16 ± 4	
m-Cresol	108394	ug/g	330	
o-Cresol	95487	ug/g	385 ± 50	
p-Cresol	106445	ug/g	270	
2,4-Dimethylphenol	105679	ug/g	380	
2,5-Dimethylphenol	95874	ug/g	320	
2,6-Dimethylphenol	576261	ug/g	175 ± 30	
Fluoranthene	206440	ug/g	54 ± 10	
Perylene	198550	ug/g	3.4 ± 2.2	
Phenanthridine	229878	ug/g	45	
Phenol	108952	ug/g	407 ± 50	
Pyrene	129000	ug/g	104 ± 18	
2,5,6-Trimethylphenol	2416946	ug/g	360	
2,4,6-Trimethylphenol	527606	ug/g	120	

TABLE 1581-1: COMPILED DATA FOR NBS SRM 1581 POLYCHLORINATED BIPHENYLS IN OILS (revised 3/1/86)

COMPOUND	CAS #	UNITS	NBS	
			Mean ±	SD
Aroclor 1242 in Motor Oil	53469219	ug/g	100 ± 1	
Aroclor 1260 in Motor Oil	11096825	ug/g	100 ± 2	
Aroclor 1242 in Transformer Oil	53469219	ug/g	100 ± 1	
Aroclor 1260 in Transformer Oil	11096825	ug/g	100 ± 3	

TABLE 1583-1: COMPILED DATA FOR NBS SRM 1583 CHLORINATED PESTICIDES IN 2,2,4-TRIMETHYLPENTANE (revised 3/1/86)

COMPOUND	CAS #	UNITS	NBS	
			Mean ±	SD
gamma-BHC	58899	ug/g	1.11 ± 0.01	
delta-BHC	319868	ug/g	0.76 ± 0.01	
Aldrin	309002	ug/g	0.86 ± 0.01	
p,p'-DDE	72559	ug/g	1.23 ± 0.03	
p,p'-DDT	50293	ug/g	1.90 ± 0.10	
Heptachlor Epoxide	1024573	ug/g	1.0	

TABLE 1582-1: COMPILED DATA FOR NBS SRM 1582 PETROLEUM CRUDE OIL (revised 3/1/86)

COMPOUND	CAS #	UNITS	NBS	CONSENSUS	MEDIAN	RANGE	METHOD MEANS Mean (n) Method
			Mean \pm SD	Mean \pm SD (n)			
Benz[a]anthracene	56553	ug/g	3.0 \pm 0.3	---	---	---	---
Benzo[ghi]perylene	191242	ug/g	---	1.7 (1)	---	---	1.7 (1) GC-MS
	192242	ug/g	1.7	---	---	---	---
Benzo[a]pyrene	50328	ug/g	1.1 \pm 0.3	1.08 \pm 0.12 (3)	1.1	0.95 - 1.2	1.2 (1) HPLC
	50328	ug/g	---	---	---	---	1.02 (2) GC-MS
Benzo[e]pyrene	192972	ug/g	3.5	---	---	---	---
Carbazole	86748	ug/g	3.4	---	---	---	---
o-Cresol	95487	ng/g	500	---	---	---	---
Dibenzothiophene	132650	ug/g	33 \pm 2	---	---	---	---
Fluoranthene	206440	ug/g	2.5 \pm 0.3	---	---	---	---
Indeno[1,2,3-cd]pyrene	193395	ng/g	170	170 (1)	---	---	170 (1) GC-MS
Perylene	198550	ug/g	31 \pm 3	30.9 \pm 1.4 (3)	30.2	30 - 32.6	30.1 (2) GC-MS
	198550	ug/g	---	---	---	---	32.6 (1) HPLC
Phenanthrene	85018	ug/g	101 \pm 5	---	---	---	---
Phenol	108952	ng/g	300	---	---	---	---
Pyrene	129000	ug/g	7	---	---	---	---

TABLE 1582-2: INDIVIDUAL DATA FOR NBS SRM 1582
(revised 3/1/86)

Conc	Uncer	Com	Method	Reference
<u>Benzo[ghi]perylene (ug/g)</u>				
1.7	0.1		GC-MS	84HIL 01
<u>Benzo[a]pyrene (ug/g)</u>				
0.95	0.05		GC-MS	84HIL 01
1.1	0.23		GC-MS	84HIL 01
1.2	0.1		HPLC	84HIL 01
<u>Indeno[1,2,3-cd]pyrene (ng/g)</u>				
170	40		GC-MS	84HIL 01
<u>Perylene (ug/g)</u>				
30	1.1		GC-MS	84HIL 01
30.2	1.7		GC-MS	84HIL 01
32.6	1.2		HPLC	84HIL 01

TABLE 1584-1: COMPILED DATA FOR NBS SRM 1584 PRIORITY POLLUTANT PHENOLS IN METHANOL
(revised 3/1/86)

COMPOUND	CAS #	UNITS	NBS		CONSENSUS Mean (n)	METHOD
			Mean \pm	SD		
4-Chloro-m-cresol	59507	ug/mL	27.4 \pm 0.4	---	---	
2-Chlorophenol	95578	ug/mL	64.4 \pm 1.4	---	---	
o-Cresol	108394	ug/mL	---	---	< 1	GC
2,4-Dichlorophenol	120832	ug/mL	35.6 \pm 1.3	---	---	
2,3-Dimethylphenol	526750	ug/mL	---	---	< 1	GC
2,4-Dimethylphenol	105679	ug/mL	51.6 \pm 0.2	---	48.6 (1)	GC
2,6-Dimethylphenol	576261	ug/mL	---	---	< 1	GC
3,4-Dimethylphenol	95658	ug/mL	---	---	< 1	GC
4,6-Dinitro-o-cresol	534521	ug/mL	20.1 \pm 0.9	---	---	
2,4-Dinitrophenol	51285	ug/mL	22.4	---	---	
m-Ethylphenol	620177	ug/mL	---	---	< 1	GC
o-Ethylphenol	90006	ug/mL	---	---	< 1	GC
p-Ethylphenol	1230709	ug/mL	---	---	< 1	GC
2-Methylphenol	95487	ug/mL	---	---	< 1	GC
2-Nitrophenol	88755	ug/mL	25.2 \pm 0.7	---	---	
4-Nitrophenol	100027	ug/mL	20.7 \pm 0.7	---	---	
Pentachlorophenol	87865	ug/mL	15.4 \pm 1.1	---	---	
Phenol	108952	ug/mL	29.7 \pm 0.9	---	27.2 (1)	GC
2,4,6-Trichlorophenol	88062	ug/mL	20.4 \pm 1.9	---	---	

TABLE 1584-2: INDIVIDUAL DATA FOR NBS SRM 1584 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>o-Cresol (ug/mL)</u>					<u>m-Ethylphenol (ug/mL)</u>				
<	1		GC	85GAU 04	<	1		GC	85GAU 04
<u>2,3-Dimethylphenol (ug/mL)</u>					<u>o-Ethylphenol (ug/mL)</u>				
<	1		GC	85GAU 04	<	1		GC	85GAU 04
<u>2,4-Dimethylphenol (ug/mL)</u>					<u>p-Ethylphenol (ug/mL)</u>				
48.6			GC	85GAU 04	<	1		GC	85GAU 04
<u>2,6-Dimethylphenol (ug/mL)</u>					<u>2-Methylphenol (ug/mL)</u>				
<	1		GC	85GAU 04	<	1		GC	85GAU 04
<u>3,4-Dimethylphenol (ug/mL)</u>					<u>Phenol (ug/mL)</u>				
<	1		GC	85GAU 04	27.2			GC	85GAU 04

TABLE 1585-1: COMPILED DATA FOR NBS SRM 1585 CHLORINATED BIPHENYLS IN ISOCTANE
(revised 3/1/86)

COMPOUND	CAS #	UNITS	NBS	
			Mean \pm	SD
4-Chlorobiphenyl	2051629	ug/g	43.3 \pm	1.0
4,4'-Dichlorobiphenyl	2050682	ug/g	9.53 \pm	0.08
2,4,4'-Trichlorobiphenyl	7012375	ug/g	3.70 \pm	0.02
2,2',5,5'-Tetrachlorobiphenyl	35693993	ug/g	7.72 \pm	0.06
3,3',4,4'-Tetrachlorobiphenyl	32598133	ug/g	6.62 \pm	0.05
2,2',4,5,5'-Pentachlorobiphenyl	37680732	ug/g	5.24 \pm	0.02
2,2',3,4,4',5'-Hexachlorobiphenyl	35065282	ug/g	2.37 \pm	0.02
2,2',4,4',5,5'-Hexachlorobiphenyl	35065271	ug/g	3.06 \pm	0.02

TABLE 1587-1: COMPILED DATA FOR NBS SRM 1587 NITRATED POLYCYCLIC AROMATIC HYDROCARBONS IN METHANOL
(revised 3/1/86)

COMPOUND	CAS #	UNITS	NBS	
			Mean \pm	SD
2-Nitrofluorene	607578	ug/g	9.67 \pm	0.39
9-Nitroanthracene	602608	ug/g	5.01 \pm	0.11
3-Nitrofluoranthene	829217	ug/g	9.24 \pm	0.06
1-Nitropyrene	5522430	ug/g	8.95 \pm	0.28
7-Nitrobenz[a]anthracene	20268513	ug/g	9.27 \pm	0.23
6-Nitrochrysene	7496028	ug/g	8.13 \pm	0.11
6-Nitrobenzo[a]pyrene	63041907	ug/g	6.1	

TABLE 1589-1: COMPILED DATA FOR NBS SRM 1589 POLYCHLORINATED BIPHENYLS IN HUMAN SERUM
(revised 3/1/86)

COMPOUND	CAS #	UNITS	NBS	
			Mean \pm	SD
Aroclor 1260	11096825	ng/g	106.0 \pm	1.3
1,2,3,4-Tetrachlorodibenzo-p-dioxin	30746588	ng/g	0.153	
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746016	ng/g	0.081	

TABLE 1590-1: COMPILED DATA FOR NBS SRM 1590 STABILIZED WINE (revised 3/1/86)

ELEMENT	UNITS	NBS		CONSENSUS Mean (n)	METHOD
		Mean \pm	SD		
As	ug/L	---		5.8 (1)	NAA
Cu	ug/L	300		270 (1)	NAA
Fe	mg/L	6		---	
K	mg/L	320		---	
Mn	ug/L	---		423 (1)	NAA
Na	mg/L	95		---	
Zn	ug/L	---		197 (1)	NAA
Volatile Acidity	g/L	0.24		---	
Ethanol	%	18.51 \pm 0.16		---	

TABLE 1590-2: INDIVIDUAL DATA FOR NBS SRM 1590 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>As (ug/L)</u>					<u>Mn (ug/L)</u>				
5.8			RTNA	84BYR 02	423	11		RTNA	84BYR 02
<u>Cu (ug/L)</u>					<u>Zn (ug/L)</u>				
270	14		RTNA	84BYR 02	197	14		RTNA	84BYR 02

TABLE 1614-1: COMPILED DATA FOR NBS SRM 1614 DIOXIN IN ISOCTANE (revised 3/1/86)

COMPOUND	CAS #	UNITS	NBS Mean
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746016	ng/g	98.3
2,3,7,8-Tetrachlorodibenzo-p-dioxin, C-13	76523405	ng/g	95.6

TABLE 1639-1: COMPILED DATA FOR NBS SRM 1639 HALOCARBONS IN METHANOL (revised 3/1/86)

COMPOUND	CAS #	UNITS	NBS Mean
Chloroform	67663	ng/uL	6235
Chlorodibromomethane	124481	ng/uL	124.6
Bromodichloromethane	74975	ng/uL	389.9
Bromoform	75252	ng/uL	86.5
Carbon Tetrachloride	56235	ng/uL	157.0
Trichloroethylene	79016	ng/uL	85.8
Tetrachloroethylene	127184	ng/uL	40.6

TABLE 1618-1: COMPILED DATA FOR NBS SRM 1618 VANADIUM AND NICKEL IN RESIDUAL FUEL OIL
(revised 3/1/86)

ELEMENT	UNITS	NBS	
		Mean \pm	SD
ASH	%	0.083	
Ni	ug/g	75.2 \pm 0.4	
S	%	4.3	
V	ug/g	423.1 \pm 3.4	

TABLE 1619-1: COMPILED DATA FOR NBS SRM 1619 SULFUR IN RESIDUAL FUEL OIL
(revised 3/1/86)

ELEMENT	UNITS	NBS	CONSENSUS	METHOD
		Mean \pm SD		
Al	ug/g	4.3	---	---
Al	ug/mL	4	---	---
As	ng/g	---	94 (1)	NAA
B	ug/g	< 1.1	---	---
B	ug/mL	< 1	---	---
Br	ng/g	---	700 (1)	NAA
Ca	ug/g	10.6	---	---
Ca	ug/mL	10	---	---
Cl	ug/g	---	20 (1)	NAA
Co	ng/g	---	350 (1)	NAA
Cr	ng/g	< 1100	380 (1)	NAA
Cr	ug/mL	< 1	---	---
Cu	ug/g	< 1.1	---	---
Cu	ug/mL	< 1	---	---
Density	g/cm ³	0.939	---	---
Eu	ug/g	---	10.2 (1)	NAA
Fe	ug/g	< 5.3	23 (1)	NAA
Fe	ug/mL	< 5	---	---
La	ng/g	---	37 (1)	NAA
Mg	ug/g	1.1	---	---
Mg	ug/mL	1	---	---
Mn	ug/g	< 1.1	---	---
Mn	ug/mL	< 1	---	---
Mo	ug/g	< 1.1	---	---
Mo	ug/mL	< 1	---	---
Na	ug/g	18	27 (1)	NAA
Na	ug/mL	17	---	---
Ni	ug/g	9.6	12 (1)	NAA
Ni	ug/mL	9	---	---
S	ug/g	7190 \pm 70	7215 (2)	NM
Sb	ng/g	---	30 (1)	NAA
Sc	ug/g	---	1.39 (1)	NAA
Se	ng/g	---	95 (1)	NAA
Si	ug/g	2.2	---	---
Si	ug/mL	2	---	---
Sm	ug/g	---	2.45 (1)	NAA
Sn	ug/g	< 1.1	---	---
Sn	ug/mL	< 1	---	---
Ti	ug/g	< 1.1	---	---
Ti	ug/mL	< 1	---	---
V	ug/g	37	42.6 (1)	NAA
V	ug/mL	35	---	---
Zn	ug/g	4.3	1.27 (1)	NAA
Zn	ug/mL	4	---	---

TABLE 1619-2: INDIVIDUAL DATA FOR NBS SRM 1619 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>As (ng/g)</u>					<u>Ni (ug/g)</u>				
94	10		ITNA	85FIL 02	12	1.1		ITNA	85FIL 02
<u>Br (ng/g)</u>					<u>S (ug/g)</u>				
700	900		ITNA	85FIL 02	7130	110	7	NM	83LI 01
					7300	180	7	NM	83LI 01
<u>Cl (ug/g)</u>					<u>Sb (ng/g)</u>				
20	1.8		ITNA	83LI 01	30	20		ITNA	85FIL 02
<u>Co (ng/g)</u>					<u>Sc (ug/g)</u>				
350	40		ITNA	85FIL 02	1.39	0.67		ITNA	85FIL 02
<u>Cr (ng/g)</u>					<u>Se (ng/g)</u>				
380	110		ITNA	85FIL 02	95	27		ITNA	85FIL 02
<u>Eu (ug/g)</u>					<u>Sm (ug/g)</u>				
10.2	2.4		ITNA	85FIL 02	2.45	0.47		ITNA	85FIL 02
<u>Fe (ug/g)</u>					<u>V (ug/g)</u>				
23	16		ITNA	85FIL 02	42.6	4.7		ITNA	85FIL 02
<u>La (ng/g)</u>					<u>Zn (ug/g)</u>				
37	6		ITNA	85FIL 02	1.27	0.35		ITNA	85FIL 02
<u>Na (ug/g)</u>									
27	6		ITNA	85FIL 02					

TABLE 1620-1: COMPILED DATA FOR NBS SRM 1620 SULFUR IN RESIDUAL FUEL OIL (revised 3/1/86)

ELEMENT	UNITS	NBS	
		Mean \pm	SD
S	%	4.48 \pm	0.02

TABLE 1620A-1: COMPILED DATA FOR NBS SRM 1620A SULFUR IN RESIDUAL FUEL OIL (revised 3/1/86)

ELEMENT	UNITS	NBS		CONSENSUS		MEDIAN	RANGE	METHOD MEANS		
		Mean \pm	SD	Mean \pm	SD (n)			Mean	(n)	Method
Al	ug/g	18		---		---	---	---		
Al	ug/mL	20		---		---	---	---		
As	ng/g	---		40	(1)	---	---	40	(1)	NAA
B	ug/g	< 0.9		---		---	---	---		
B	ug/mL	< 1		---		---	---	---		
Br	ng/g	---		600	(1)	---	---	600	(1)	NAA
Ca	ug/g	8.2		---		---	---	---		
Ca	ug/mL	9		---		---	---	---		
Cl	ug/g	---		11.8	(1)	---	---	11.8	(1)	NAA
Co	ng/g	---		80	(1)	---	---	80	(1)	NAA
Cr	ng/g	< 900		200	(1)	---	---	200	(1)	NAA
Cr	ug/mL	< 1		---		---	---	---		
Cu	ug/g	< 0.9		---		---	---	---		
Cu	ug/mL	< 1		---		---	---	---		
Density	g/cm ³	1.096		---		---	---	---		
Eu	ng/g	---		10	(1)	---	---	10	(1)	NAA
Fe	ug/g	< 4.6		11	(1)	---	---	11	(1)	NAA
Fe	ug/mL	< 5		---		---	---	---		
Flash Pt.	deg. C	70		---		---	---	---		
La	ng/g	---		500	(1)	---	---	500	(1)	NAA
Mg	ug/g	< 0.9		---		---	---	---		
Mg	ug/mL	< 1		---		---	---	---		
Mn	ug/g	< 0.9		---		---	---	---		
Mn	ug/mL	< 1		---		---	---	---		
Mo	ug/g	< 0.9		---		---	---	---		
Mo	ug/mL	< 1		---		---	---	---		
Na	ug/g	28		9.4	(1)	---	---	9.4	(1)	NAA
Na	ug/mL	31		---		---	---	---		
Ni	ug/g	< 0.9		< 2		---	---	< 2		NAA
Ni	ug/mL	< 1		---		---	---	---		
S	%	4.504 \pm 0.010		4.48 \pm 0.02	(3)	4.49	4.46 - 4.49	4.49	(1)	ICPES
S	%	---		---		---	---	4.48	(2)	NM
Sb	ng/g	---		100	(1)	---	---	100	(1)	NAA
Sc	ug/g	---		2	(1)	---	---	2	(1)	NAA
Se	ng/g	---		80	(1)	---	---	80	(1)	NAA
Si	ug/g	12		---		---	---	---		
Si	ug/mL	13		---		---	---	---		
Sm	ug/g	---		9	(1)	---	---	9	(1)	NAA
Sn	ug/g	< 0.9		---		---	---	---		
Sn	ug/mL	< 1		---		---	---	---		
Ti	ug/g	< 0.9		---		---	---	---		
Ti	ug/mL	< 1		---		---	---	---		
V	ng/g	< 900		< 200		---	---	< 200		NAA
V	ug/mL	< 1		---		---	---	---		
Zn	ug/g	21		0.7	(1)	---	---	0.7	(1)	NAA
Zn	ug/mL	23		---		---	---	---		

TABLE 1620A-2: INDIVIDUAL DATA FOR NBS SRM 1620A (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>As (ng/g)</u>					<u>Ni (ug/g)</u>				
40	10		ITNA	85FIL 02	<	2		ITNA	85FIL 02
<u>Br (ng/g)</u>					<u>S (%)</u>				
600	600		ITNA	85FIL 02	4.46	0.13	7	NM	83LI 01
					4.49	0.03		ICPES	85FAB 01
<u>Cl (ug/g)</u>					4.49	0.12	7	NM	83LI 01
11.8	1		ITNA	83LI 01	<u>Sb (ng/g)</u>				
<u>Co (ng/g)</u>					100	140		ITNA	85FIL 02
80	60		ITNA	85FIL 02	<u>Sc (ug/g)</u>				
<u>Cr (ng/g)</u>					2	0.6		ITNA	85FIL 02
200	70		ITNA	85FIL 02	<u>Se (ng/g)</u>				
<u>Eu (ng/g)</u>					80	20		ITNA	85FIL 02
10	3		ITNA	85FIL 02	<u>Sm (ug/g)</u>				
<u>Fe (ug/g)</u>					9	5		ITNA	85FIL 02
11	7		ITNA	85FIL 02	<u>V (ng/g)</u>				
<u>La (ng/g)</u>					<	200		ITNA	85FIL 02
500	300		ITNA	85FIL 02	<u>Zn (ug/g)</u>				
<u>Na (ug/g)</u>					0.7	0.5		ITNA	85FIL 02
9.4	2.9		ITNA	85FIL 02					

TABLE 1621-1: COMPILED DATA FOR NBS SRM 1621 SULFUR IN RESIDUAL FUEL OIL (revised 3/1/86)

ELEMENT	UNITS	NBS	CONSENSUS			RANGE	METHOD MEANS	
		Mean \pm SD	Mean \pm SD	(n)			Mean (n)	Method
S	%	1.05 \pm 0.02	1.01 \pm 0.05	(5)	1.05	0.9 - 1.06	1.06 (1)	XRF
S	%	---	---		---	---	0.99 (1)	IC
S	%	---	---		---	---	0.9 (1)	MECA
S	%	---	---		---	---	1.05 (1)	TITR
S	%	---	---		---	---	1.05 (1)	CB

TABLE 1621-2: INDIVIDUAL DATA FOR NBS SRM 1621 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference
<u>S (%)</u>				
0.9	0.1		MECA	80MCC 01
0.99	0.03		IC	80MCC 01
1.05	0.01		CB	84LEC 02
1.05	0.03		TITR	80MCC 01
1.06			XRF	80MCC 01

TABLE 1621A-1: COMPILED DATA FOR NBS SRM 1621A SULFUR IN RESIDUAL FUEL OIL (revised 3/1/86)

ELEMENT	UNITS	NBS	CONSENSUS			RANGE	METHOD MEANS	
		Mean \pm SD	Mean \pm SD	(n)			Mean (n)	Method
S	%	0.94 \pm 0.01	0.94 \pm 0.03	(7)	0.94	0.89 - 0.973	0.9715 (2)	XRF
S	%	---	---		---	---	0.935 (2)	ICPES
S	%	---	---		---	---	0.89 (1)	POL
S	%	---	---		---	---	0.945 (1)	TITR
S	%	---	---		---	---	0.931 (1)	IC

TABLE 1621A-2: INDIVIDUAL DATA FOR NBS SRM 1621A (revised 3/1/86)

Conc	Uncer	Com	Method	Reference
<u>S (%)</u>				
0.89	0.07		POL	81REL 01
0.93	0.02		ICPES	81WAL 02
0.931	0.01		IC	82VIS 01
0.94	0.02		ICPES	84BAR 03
0.945	0.014		TITR	82VIS 01
0.97	0.009	6	EXRF	81CHR 01
0.973	0.008	6	EXRF	81CHR 01

TABLE 1621B-1: COMPILED DATA FOR NBS SRM 1621B SULFUR IN RESIDUAL FUEL OIL (revised 3/1/86)

ELEMENT	UNITS	NBS	CONSENSUS		MEDIAN	RANGE	METHOD MEANS		
		Mean \pm SD	Mean \pm SD	(n)			Mean \pm SD	(n)	Method
Al	ug/g	6.5	---	---	---	---	---	---	---
Al	ug/mL	6	---	---	---	---	---	---	---
B	ug/g	< 1.1	---	---	---	---	---	---	---
B	ug/mL	< 1	---	---	---	---	---	---	---
Ca	ug/g	9.7	---	---	---	---	---	---	---
Ca	ug/mL	9	---	---	---	---	---	---	---
Cr	ug/g	3.2	---	---	---	---	---	---	---
Cr	ug/mL	3	---	---	---	---	---	---	---
Cu	ug/g	< 1.1	---	---	---	---	---	---	---
Cu	ug/mL	< 1	---	---	---	---	---	---	---
Density	g/cm ³	0.929	---	---	---	---	---	---	---
Fe	ug/g	< 5.4	---	---	---	---	---	---	---
Fe	ug/mL	< 5	---	---	---	---	---	---	---
Flash Pt.	deg. C	111	---	---	---	---	---	---	---
Mg	ug/g	< 1.1	---	---	---	---	---	---	---
Mg	ug/mL	< 1	---	---	---	---	---	---	---
Mn	ug/g	1.1	---	---	---	---	---	---	---
Mn	ug/mL	1	---	---	---	---	---	---	---
Mo	ug/g	< 1.1	---	---	---	---	---	---	---
Mo	ug/mL	< 1	---	---	---	---	---	---	---
Na	ug/g	8.6	---	---	---	---	---	---	---
Na	ug/mL	8	---	---	---	---	---	---	---
Ni	ug/g	6.5	---	---	---	---	---	---	---
Ni	ug/mL	6	---	---	---	---	---	---	---
S	%	0.95 \pm 0.005	0.948 \pm 0.014	(7)	0.944	0.935 - 0.975	0.954 \pm 0.015	(4)	XRF
S	%	---	---	---	---	---	0.953	(1)	ICPES
S	%	---	---	---	---	---	0.935	(2)	COUL
Si	ug/g	6.5	---	---	---	---	---	---	---
Si	ug/mL	6	---	---	---	---	---	---	---
Sn	ug/g	< 1.1	---	---	---	---	---	---	---
Sn	ug/mL	< 1	---	---	---	---	---	---	---
Ti	ug/g	< 1.1	---	---	---	---	---	---	---
Ti	ug/mL	< 1	---	---	---	---	---	---	---
V	ug/g	16	---	---	---	---	---	---	---
V	ug/mL	15	---	---	---	---	---	---	---
Zn	ug/g	16	---	---	---	---	---	---	---
Zn	ug/mL	15	---	---	---	---	---	---	---

TABLE 1621B-2: INDIVIDUAL DATA FOR NBS SRM 1621B (revised 3/1/86)

Conc	Uncer	Com	Method	Reference
<hr/>				
S (%)				
0.935			COUL	84TAK 01
0.935			COUL	83TAK 01
0.944			XRF	83TAK 01
0.944			XRF	84TAK 01
0.953	0.003		ICPES	85FAB 01
0.953	0.031	32	EXRF	83SAN 02
0.975	0.031	32	EXRF	83SAN 02

TABLE 1622-1: COMPILED DATA FOR NBS SRM 1622 SULFUR IN RESIDUAL FUEL OIL (revised 3/1/86)

ELEMENT	UNITS	NBS		CONSENSUS			RANGE	METHOD MEANS		
		Mean	± SD	Mean	± SD	(n)		Mean	(n)	Method
S	%	2.14	± 0.01	2.16		(2)	2.15 - 2.16	2.16	(1)	ICPES
S	%	---		---			---	2.15	(1)	CB

TABLE 1622-2: INDIVIDUAL DATA FOR NBS SRM 1622 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference
<u>S (%)</u>				
2.15	0.03		CB	84LEC 02
2.16	0.02		ICPES	85FAB 01

TABLE 1622A-1: COMPILED DATA FOR NBS SRM 1622A SULFUR IN RESIDUAL FUEL OIL (revised 3/1/86)

ELEMENT	UNITS	NBS		CONSENSUS			RANGE	METHOD MEANS		
		Mean	± SD	Mean	± SD	(n)		Mean	(n)	Method
S	%	1.96	± 0.04	2.00	± 0.03	(4)	1.948 - 2.02	1.98	(2)	XRF
S	%	---		---			---	2.02	(2)	ICPES

TABLE 1622A-2: INDIVIDUAL DATA FOR NBS SRM 1622A (revised 3/1/86)

Conc	Uncer	Com	Method	Reference
<u>S (%)</u>				
1.6	0.1		POL	81REL 01
1.948	0.018	6	EXRF	81CHR 01
2.01	0.02		ICPES	84BAR 03
2.011	0.015	6	EXRF	81CHR 01
2.02	0.02		ICPES	81WAL 02

TABLE 1622C-1: COMPILED DATA FOR NBS SRM 1622C SULFUR IN RESIDUAL FUEL OIL (revised 3/1/86)

ELEMENT	UNITS	NBS	
		Mean	± SD
S	%	2.012	± 0.025

TABLE 1622B-1: COMPILED DATA FOR NBS SRM 1622B SULFUR IN RESIDUAL FUEL OIL (revised 3/1/86)

ELEMENT	UNITS	NBS	CONSENSUS			MEDIAN	RANGE	METHOD MEANS		
		Mean \pm SD	Mean \pm SD	(n)				Mean \pm SD	(n)	Method
Al	ug/g	8.1	---		---	---	---	---		
Al	ug/mL	8	---		---	---	---	---		
B	ug/g	< 1	---		---	---	---	---		
B	ug/mL	< 1	---		---	---	---	---		
Ca	ug/g	24.4	---		---	---	---	---		
Ca	ug/mL	24	---		---	---	---	---		
Cr	ug/g	1	---		---	---	---	---		
Cr	ug/mL	1	---		---	---	---	---		
Cu	ug/g	< 1	---		---	---	---	---		
Cu	ug/mL	< 1	---		---	---	---	---		
Density	g/cm ³	0.984	---		---	---	---	---		
Fe	ug/g	< 5.1	---		---	---	---	---		
Fe	ug/mL	< 5	---		---	---	---	---		
Flash Pt.	deg. C	65	---		---	---	---	---		
Mg	ug/g	2	---		---	---	---	---		
Mg	ug/mL	2	---		---	---	---	---		
Mn	ug/g	1	---		---	---	---	---		
Mn	ug/mL	1	---		---	---	---	---		
Mo	ug/g	< 1	---		---	---	---	---		
Mo	ug/mL	< 1	---		---	---	---	---		
Na	ug/g	25.4	---		---	---	---	---		
Na	ug/mL	25	---		---	---	---	---		
Ni	ug/g	15.2	---		---	---	---	---		
Ni	ug/mL	15	---		---	---	---	---		
S	%	1.982 \pm 0.018	1.98 \pm 0.01	(6)	1.979	1.971 - 2.01	2.00 \pm 0.04	(4)		XRF
S	%	---	---		---	---	2.01	(1)		ICPES
S	%	---	---		---	---	1.98	(2)		COUL
Si	ug/g	13.2	---		---	---	---	---		
Si	ug/mL	13	---		---	---	---	---		
Sn	ug/g	< 1	---		---	---	---	---		
Sn	ug/mL	< 1	---		---	---	---	---		
Ti	ug/g	< 1	---		---	---	---	---		
Ti	ug/mL	< 1	---		---	---	---	---		
V	ug/g	51	---		---	---	---	---		
V	ug/mL	50	---		---	---	---	---		
Zn	ug/g	11.2	---		---	---	---	---		
Zn	ug/mL	11	---		---	---	---	---		

TABLE 1622B-2: INDIVIDUAL DATA FOR NBS SRM 1622B (revised 3/1/86)

Conc	Uncer	Com	Method	Reference
<u>S (%)</u>				
1.971	0.031	32	EXRF	83SAN 02
1.977			COUL	83TAK 01
1.977			COUL	84TAK 01
1.979			XRF	84TAK 01
1.979			XRF	83TAK 01
2.01	0.02		ICPES	85FAB 01
2.06	0.07	32	EXRF	83SAN 02

TABLE 1623-1: COMPILED DATA FOR NBS SRM 1623 SULFUR IN RESIDUAL FUEL OIL (revised 3/1/86)

ELEMENT	UNITS	NBS	CONSENSUS		MEDIAN	RANGE	METHOD MEANS	
		Mean \pm SD	Mean \pm SD	(n)			Mean (n)	Method
S	ug/g	2680 \pm 40	2710 \pm 130	(4)	2650	2600 - 2900	2700 (1)	XRF
S	ug/g	---	---	---	---	---	2600 (1)	MECA
S	ug/g	---	---	---	---	---	2900 (1)	TITR
S	ug/g	---	---	---	---	---	2650 (1)	IC

TABLE 1623A-1: COMPILED DATA FOR NBS SRM 1623A SULFUR IN RESIDUAL FUEL OIL (revised 3/1/86)

ELEMENT	UNITS	NBS	CONSENSUS		MEDIAN	RANGE	METHOD MEANS	
		Mean \pm SD	Mean \pm SD	(n)			Mean \pm SD (n)	Method
Al	ug/g	5.4	---	---	---	---	---	---
Al	ug/mL	5	---	---	---	---	---	---
B	ug/g	< 1.1	---	---	---	---	---	---
B	ug/mL	< 1	---	---	---	---	---	---
Ca	ug/g	9.8	---	---	---	---	---	---
Ca	ug/mL	9	---	---	---	---	---	---
Cr	ug/g	1.1	---	---	---	---	---	---
Cr	ug/mL	1	---	---	---	---	---	---
Cu	ug/g	< 1.1	---	---	---	---	---	---
Cu	ug/mL	< 1	---	---	---	---	---	---
Density	g/cm ³	0.918	---	---	---	---	---	---
Fe	ug/g	< 5.4	---	---	---	---	---	---
Fe	ug/mL	< 5	---	---	---	---	---	---
Flash Pt.	deg. C	140	---	---	---	---	---	---
Mg	ug/g	< 1.1	---	---	---	---	---	---
Mg	ug/mL	< 1	---	---	---	---	---	---
Mn	ug/g	< 1.1	---	---	---	---	---	---
Mn	ug/mL	< 1	---	---	---	---	---	---
Mo	ug/g	< 1.1	---	---	---	---	---	---
Mo	ug/mL	< 1	---	---	---	---	---	---
Na	ug/g	9.8	---	---	---	---	---	---
Na	ug/mL	9	---	---	---	---	---	---
Ni	ug/g	1.1	---	---	---	---	---	---
Ni	ug/mL	1	---	---	---	---	---	---
S	ug/g	2400 \pm 30	2340 \pm 50	(6)	2310	2300 - 2400	2370 \pm 40	(4) XRF
S	ug/g	---	---	---	---	---	2300	(2) COUL
Si	ug/g	< 1.1	---	---	---	---	---	---
Si	ug/mL	< 1	---	---	---	---	---	---
Sn	ug/g	< 1.1	---	---	---	---	---	---
Sn	ug/mL	< 1	---	---	---	---	---	---
Ti	ug/g	< 1.1	---	---	---	---	---	---
Ti	ug/mL	< 1	---	---	---	---	---	---
V	ug/g	3.3	---	---	---	---	---	---
V	ug/mL	3	---	---	---	---	---	---
Zn	ug/g	16.3	---	---	---	---	---	---
Zn	ug/mL	15	---	---	---	---	---	---

TABLE 1623-2: INDIVIDUAL DATA FOR NBS SRM 1623
(revised 3/1/86)

Conc	Uncer	Com	Method	Reference
<u>S (ug/g)</u>				
2600	200		MECA	80MCC 01
2650	40		IC	80MCC 01
2700			XRF	80MCC 01
2900	500		TITR	80MCC 01

TABLE 1623A-2: INDIVIDUAL DATA FOR NBS SRM 1623A
(revised 3/1/86)

Conc	Uncer	Com	Method	Reference
<u>S (ug/g)</u>				
2300			COUL	84TAK 01
2300			COUL	83TAK 01
2310	240	32	EXRF	83SAN 02
2380			XRF	84TAK 01
2380			XRF	83TAK 01
2400	50	32	EXRF	83SAN 02

TABLE 1624-1: COMPILED DATA FOR NBS SRM 1624 SULFUR IN DISTILLATE OIL (revised 3/1/86)

ELEMENT	UNITS	NBS Mean \pm SD	CONSENSUS Mean \pm SD (n)	MEDIAN	RANGE	METHOD MEANS Mean (n) Method
S	ug/g	2110 \pm 40	2050 \pm 120 (4)	2030	1900 - 2200	1900 (1) ICPES
S	ug/g	---	---	---	---	2200 (1) POL
S	ug/g	---	---	---	---	2030 (1) TITR
S	ug/g	---	---	---	---	2080 (1) IC

TABLE 1624A-1: COMPILED DATA FOR NBS SRM 1624A SULFUR IN DISTILLATE OIL (revised 3/1/86)

ELEMENT	UNITS	NBS Mean \pm SD	CONSENSUS Mean \pm SD (n)	MEDIAN	RANGE	METHOD MEANS Mean \pm SD (n) Method
Al	ug/g	1.2	---	---	---	---
Al	ug/mL	1	---	---	---	---
B	ug/g	< 1.2	---	---	---	---
B	ug/mL	< 1	---	---	---	---
Ca	ug/g	8.2	---	---	---	---
Ca	ug/mL	7	---	---	---	---
Cr	ug/g	< 1.2	---	---	---	---
Cr	ug/mL	< 1	---	---	---	---
Cu	ug/g	< 1.2	---	---	---	---
Cu	ug/mL	< 1	---	---	---	---
Density	g/cm ³	0.848	---	---	---	---
Fe	ug/g	< 5.9	---	---	---	---
Fe	ug/mL	< 5	---	---	---	---
Mg	ug/g	< 1.2	---	---	---	---
Mg	ug/mL	< 1	---	---	---	---
Mn	ug/g	< 1.2	---	---	---	---
Mn	ug/mL	< 1	---	---	---	---
Mo	ug/g	< 1.2	---	---	---	---
Mo	ug/mL	< 1	---	---	---	---
Na	ug/g	< 1.2	---	---	---	---
Na	ug/mL	< 1	---	---	---	---
Ni	ug/g	< 1.2	---	---	---	---
Ni	ug/mL	< 1	---	---	---	---
S	ug/g	1410 \pm 20	1420 \pm 20 (5)	1420	1400 - 1450	1440 \pm 20 (3) XRF
S	ug/g	---	---	---	---	1400 (2) COUL
Si	ug/g	< 1.2	---	---	---	---
Si	ug/mL	< 1	---	---	---	---
Sn	ug/g	< 1.2	---	---	---	---
Sn	ug/mL	< 1	---	---	---	---
Ti	ug/g	< 1.2	---	---	---	---
Ti	ug/mL	< 1	---	---	---	---
V	ug/g	< 1.2	---	---	---	---
V	ug/mL	< 1	---	---	---	---
Zn	ug/g	< 1.2	---	---	---	---
Zn	ug/mL	< 1	---	---	---	---

TABLE 1624-2: INDIVIDUAL DATA FOR NBS SRM 1624
(revised 3/1/86)

Conc	Uncer	Com	Method	Reference
<u>S (ug/g)</u>				
1900	100		ICPES	81WAL 02
2030	50		TITR	82VIS 01
2080	210		IC	82VIS 01
2200	200		POL	81REL 01

TABLE 1624A-2: INDIVIDUAL DATA FOR NBS SRM 1624A
(revised 3/1/86)

Conc	Uncer	Com	Method	Reference
<u>S (ug/g)</u>				
1400			COUL	84TAK 01
1400			COUL	83TAK 01
1420	90	32	EXRF	83SAN 02
1450			XRF	83TAK 01
1450			XRF	84TAK 01
1540	280	32	EXRF	83SAN 02

TABLE 1630-1: COMPILED DATA FOR NBS SRM 1630 MERCURY IN COAL (revised 3/1/86)

ELEMENT	UNITS	NBS		CONSENSUS			MEDIAN	RANGE	METHOD MEANS			
		Mean \pm	SD	Mean \pm	SD	(n)			Mean \pm	SD	(n)	Method
ASH	%	---		2.2		(1)	---	---	2.2		(1)	CB
Al	ug/g	---		5300		(1)	---	---	---			
As	ug/g	---		19		(1)	---	---	---			
B	ug/g	---		5		(1)	---	---	---			
Be	ug/g	---		1		(1)	---	---	---			
Br	ug/g	---		33		(2)	---	29 - 37	37		(1)	NAA
Ca	ug/g	---		700		(1)	---	---	---			
Cd	ng/g	---		< 200			---	---	---			
Cl	ug/g	---		1725		(2)	---	1230 - 2220	1230		(1)	IC
Co	ug/g	---		4.8		(2)	---	3.6 - 6	3.6		(1)	NAA
Cr	ug/g	---		7.55		(2)	---	7.1 - 8	7.1		(1)	NAA
Cu	ug/g	---		16		(1)	---	---	---			
F	ug/g	---		25		(1)	---	---	---			
Fe	%	---		0.77		(2)	---	0.51 - 1.04	0.51		(1)	NAA
Ga	ug/g	---		1.08		(2)	---	1.07 - 1.1	1.07		(1)	NAA
Ge	ug/g	---		1		(1)	---	---	---			
H ₂ O-	%	---		0.4		(1)	---	---	0.4		(1)	GRAV
Hg	ng/g	130 \pm 10		126 \pm 13		(20)	127	104 - 150	122 \pm 13		(9)	NAA
Hg	ng/g	---		---			---	---	135		(1)	OES
Hg	ng/g	---		---			---	---	118		(1)	FAE
Hg	ng/g	---		---			---	---	130 \pm 14		(8)	AA
K	ug/g	---		800		(1)	---	---	---			
La	ug/g	---		4.4		(1)	---	---	4.4		(1)	NAA
Mg	ug/g	---		200		(1)	---	---	---			
Mn	ug/g	---		6		(1)	---	---	---			
Mo	ug/g	---		2		(1)	---	---	---			
Na	ug/g	---		405		(2)	---	320 - 490	490		(1)	NAA
Ni	ug/g	---		10		(1)	---	---	---			
P	ug/g	---		17		(1)	---	---	---			
Pb	ug/g	---		4		(1)	---	---	---			
S	%	---		1.14 \pm 0.20		(3)	1.07	0.99 - 1.37	1.37		(1)	XRF
S	%	---		---			---	---	0.99		(1)	IC
S	%	---		---			---	---	1.07		(1)	CB
Sb	ug/g	---		1.15		(2)	---	0.6 - 1.7	1.7		(1)	NAA
Sc	ug/g	---		1.4		(1)	---	---	1.4		(1)	NAA
Se	ug/g	2.1		2.2 \pm 0.2		(6)	2.11	2.0 - 2.6	2.23 \pm 0.25		(4)	NAA
Se	ug/g	---		---			---	---	2.12		(1)	ICPES
Si	ug/g	---		7200		(1)	---	---	---			
Sn	ug/g	---		6		(1)	---	---	---			
Ti	ug/g	---		500		(1)	---	---	---			
V	ug/g	---		24		(1)	---	---	---			
Zn	ug/g	---		6		(1)	---	---	---			
Zr	ug/g	---		21		(1)	---	---	---			

TABLE 1630-2: INDIVIDUAL DATA FOR NBS SRM 1630 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Al (ug/g)</u>					<u>F (ug/g)</u>				
5300			VV	77GLU 01	25			VV	77GLU 01
<u>As (ug/g)</u>					<u>Fe (%)</u>				
19			VV	77GLU 01	0.51	0.0204		ITNA	74TAM 01
					1.04			VV	77GLU 01
<u>ASH (%)</u>					<u>Ga (ug/g)</u>				
2.2			CB	77GLU 01	1.07	0.04		RTNA	72SAN 01
<u>B (ug/g)</u>					1.1			VV	77GLU 01
5			VV	77GLU 01	<u>Ge (ug/g)</u>				
<u>Be (ug/g)</u>					1			VV	77GLU 01
1			VV	77GLU 01	<u>H2O- (%)</u>				
<u>Br (ug/g)</u>					0.4			GRAV	77GLU 01
29			VV	77GLU 01	<u>Hg (ng/g)</u>				
37			ITNA	74TAM 01	104	6		CVAA	80NAD 01
<u>Ca (ug/g)</u>					105			RTNA	74RIC 01
700			VV	77GLU 01	105	30		RTNA	72LYO 01
<u>Cd (ug/g)</u>					106			ITNA	74RIC 01
<	0.2	L	VV	77GLU 01	118	11		FAE	76CAV 01
<u>Cl (ug/g)</u>					120	10		CVAA	73LO 01
1230	40		IC	85GEN 01	124	11		CVAA	82DOO 01
2220			VV	77GLU 01	125	10		CVAA	75WIM 01
<u>Co (ug/g)</u>					127	5		RTNA	74ORV 01
3.6	0.18		ITNA	74TAM 01	127	6		RTNA	72RAI 01
6			VV	77GLU 01	127	12		RTNA	72ROO 01
<u>Cr (ug/g)</u>					130	10		RTNA	75LIT 01
7.1	0.35		ITNA	74TAM 01	130	10		ITNA	74TAM 01
8			VV	77GLU 01	135			OES	75PEC 01
<u>Cu (ug/g)</u>					136	7		FAA	82UCH 02
16			VV	77GLU 01	139	7		CVAA	72RAI 01
					139	12		FAA	72ROO 01
					140			RTNA	75FRO 01
					140			VV	77GLU 01
					150			CVAA	75MUR 01
					486	60		ITNA	75LIT 01
					<u>K (ug/g)</u>				
					800			VV	77GLU 01
					<u>La (ug/g)</u>				
					4.4			ITNA	74TAM 01

TABLE 1630-2: INDIVIDUAL DATA FOR NBS SRM 1630 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Mg (ug/g)</u>					<u>Sb (ug/g)</u>				
200			VV	77GLU 01	0.6			VV	77GLU 01
					1.7	0.51		ITNA	74TAM 01
<u>Mn (ug/g)</u>					<u>Sc (ug/g)</u>				
6			VV	77GLU 01	1.4	0.06		ITNA	74TAM 01
<u>Mo (ug/g)</u>					<u>Se (ug/g)</u>				
2			VV	77GLU 01	2			VV	77GLU 01
<u>Na (ug/g)</u>					2.09	0.06		RTNA	74ORV 01
320			VV	77GLU 01	2.11	0.09		RTNA	72ROO 03
490			ITNA	74TAM 01	2.11	0.09		RTNA	77ROO 02
					2.12	0.09		ICPES	80HAA 01
<u>Ni (ug/g)</u>					2.6	0.21		ITNA	74TAM 01
10			VV	77GLU 01	<u>Si (ug/g)</u>				
<u>P (ug/g)</u>					7200			VV	77GLU 01
17			VV	77GLU 01	<u>Sn (ug/g)</u>				
<u>Pb (ug/g)</u>					6			VV	77GLU 01
4			VV	77GLU 01	<u>Ti (ug/g)</u>				
<u>S (%)</u>					500			VV	77GLU 01
0.99	0.05		IC	85GEN 01	<u>V (ug/g)</u>				
1.07			CB	77GLU 01	24			VV	77GLU 01
1.37			XRF	77GLU 01	<u>Zn (ug/g)</u>				
					6			VV	77GLU 01
					<u>Zr (ug/g)</u>				
					21			VV	77GLU 01

TABLE 1631A-1: COMPILED DATA FOR NBS SRM 1631A SULFUR IN COAL
(revised 3/1/86)

ELEMENT	UNITS	NBS	CONSENSUS	MEDIAN	RANGE	METHOD MEANS		
		Mean \pm SD	Mean \pm SD (n)			Mean \pm SD (n)	Method	
ASH	%	5.00 \pm 0.02	---	---	---	---		
H ₂ O	%	0.84	---	---	---	---		
Hg	ng/g	73	---	---	---	---		
Pb	ug/g	5.44	---	---	---	---		
S	ug/g	5460 \pm 30	5570 \pm 250 (8)	5460	5260 - 5990	5900 (1)	TCGS	
S	ug/g	---	---	---	---	5375 (2)	TITR	
S	ug/g	---	---	---	---	5460 (1)	IC	
S	ug/g	---	---	---	---	5610 \pm 260 (4)	CB	

TABLE 1631B-1: COMPILED DATA FOR NBS SRM 1631B SULFUR IN COAL
(revised 3/1/86)

ELEMENT	UNITS	NBS	CONSENSUS	MEDIAN	RANGE	METHOD MEANS		
		Mean \pm SD	Mean \pm SD (n)			Mean \pm SD (n)	Method	
ASH	%	14.59 \pm 0.09	---	---	---	---		
H ₂ O	%	0.69	---	---	---	---		
Hg	ng/g	41	---	---	---	---		
Pb	ug/g	5.97	---	---	---	---		
S	%	2.016 \pm 0.014	2.01 \pm 0.08 (6)	1.97	1.92 - 2.14	2.02 (1)	TCGS	
S	%	---	---	---	---	1.98 (2)	TITR	
S	%	---	---	---	---	1.97 (1)	IC	
S	%	---	---	---	---	2.045 (2)	CB	

TABLE 1631C-1: COMPILED DATA FOR NBS SRM 1631C SULFUR IN COAL
(revised 3/1/86)

ELEMENT	UNITS	NBS	CONSENSUS	MEDIAN	RANGE	METHOD MEANS		
		Mean \pm SD	Mean \pm SD (n)			Mean \pm SD (n)	Method	
ASH	%	6.17 \pm 0.02	---	---	---	---		
H ₂ O	%	0.47	---	---	---	---		
S	%	3.02 \pm 0.008	3.03 \pm 0.06 (7)	3.00	2.97 - 3.117	2.98 (1)	TCGS	
S	%	---	---	---	---	3.05 (2)	TITR	
S	%	---	---	---	---	3.09 (1)	IC	
S	%	---	---	---	---	3.00 \pm 0.04 (3)	CB	

TABLE 1631A-2: INDIVIDUAL DATA FOR NBS SRM 1631A
(revised 3/1/86)

Conc	Uncer	Com	Method	Reference
<u>S (ug/g)</u>				
5260	350		TITR	80ARO 01
5420	60		CB	86GAU 01
5450	80		CB	84LEC 02
5460			IC	77SMI 05
5490			TITR	74HIC 01
5590	50		CB	84GLA 11
5900	400		TCGS	77JUR 01
5990	20		CB	85GLA 03

TABLE 1631B-2: INDIVIDUAL DATA FOR NBS SRM 1631B
(revised 3/1/86)

Conc	Uncer	Com	Method	Reference
<u>S (%)</u>				
1.92			TITR	74HIC 01
1.95	0.07		CB	85GLA 03
1.97			IC	77SMI 05
2.02	0.05		TCGS	77JUR 01
2.042	0.067		TITR	80ARO 01
2.14	0.09		CB	86GAU 01

TABLE 1631C-2: INDIVIDUAL DATA FOR NBS SRM 1631C
(revised 3/1/86)

Conc	Uncer	Com	Method	Reference
<u>S (%)</u>				
2.97			CB	82ANO 01
2.98	0.02		TCGS	77JUR 01
2.99			TITR	74HIC 01
3	0.05		CB	85GLA 03
3.04	0.03		CB	86GAU 01
3.09			IC	77SMI 05
3.117	0.097		TITR	80ARO 01

TABLE 1632-1: COMPILED DATA FOR NBS SRM 1632 TRACE ELEMENTS IN COAL (revised 3/1/86)

ELE	UNITS	NBS		CONSENSUS		MEDIAN	RANGE	AA		NAA		ICPES		XRF		OTHER METHODS		Mean	(n)	Method
		Mean \pm	SD	Mean \pm	SD (n)			Mean \pm	SD (n)	Mean \pm	SD (n)	Mean \pm	SD (n)	Mean \pm	SD (n)	Mean \pm	SD (n)			
ASH	%	---	---	12.7	(2)	---	12.17 - 13.2	---	---	---	---	---	---	---	---	12.68	(2)	---	---	---
Ag	ng/g	< 100	---	63 \pm 13	(5)	60	45 - 80	80	(1)	55 \pm 9	(3)	---	---	---	---	70	(1)	---	---	---
Al	%	---	---	1.73 \pm 0.10	(32)	1.72	1.57 - 1.9	1.71	(2)	1.74 \pm 0.10	(21)	1.70 \pm 0.09	(8)	---	---	1.68	(1)	---	---	---
As	ug/g	5.9 \pm 0.6	---	5.8 \pm 0.5	(52)	5.8	4.61 - 7	5.64 \pm 0.06	(5)	5.9 \pm 0.4	(29)	5.9	(2)	5.8 \pm 1.0	(3)	6.0 \pm 0.3	(6)	---	---	5 (1) OES
As	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	6.1 (1) GCMES
As	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	5.55 (2) FAE
Au	ng/g	---	---	0.92	(2)	---	0.85 - 0.99	---	---	0.92	(2)	---	---	---	---	---	---	---	---	---
B	ug/g	---	---	41 \pm 8	(7)	43	29 - 47.7	---	---	---	---	29	(1)	---	---	46.1 \pm 2.7	(4)	---	---	30 (1) OES
Ba	ug/g	---	---	326 \pm 32	(33)	314	256 - 390	---	---	332 \pm 31	(27)	240 \pm 70	(5)	301	(1)	314	(2)	---	---	---
Be	ug/g	1.5	---	1.62 \pm 0.10	(13)	1.63	1.49 - 1.85	1.60 \pm 0.08	(9)	1.7	(1)	1.77 \pm 0.08	(3)	---	---	1.2	(1)	---	---	1.49 (1) FLUOR
Bi	ug/g	---	---	1.05	(1)	---	---	---	---	---	---	---	---	---	---	1.05	(1)	---	---	---
Br	ug/g	---	---	17.7 \pm 1.7	(32)	18	14 - 20	---	---	17.6 \pm 1.8	(28)	---	---	19.0 \pm 2.7	(5)	---	---	---	---	---
C	%	---	---	70.6 \pm 1.7	(5)	70	68.93 - 73	---	---	---	---	---	---	---	---	70.1 \pm 1.4	(3)	---	---	---
Ca	ug/g	---	---	4180 \pm 420	(30)	4200	3300 - 5100	4950	(1)	4040 \pm 320	(14)	4150 \pm 230	(7)	4310	(2)	4450	(2)	---	---	71.5 (2) TCGS
Ca	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Ca	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Cd	ng/g	190 \pm 30	---	209 \pm 26	(26)	200	170 - 250	222 \pm 26	(10)	220 \pm 17	(3)	---	---	---	---	---	---	---	---	5100 (1) OES
Cd	ng/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2840 (1) GAMMA
Cd	ng/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	4030 (1) 14NAA
Ce	ug/g	---	---	20.7 \pm 1.9	(26)	20.4	17.34 - 26	---	---	20.4 \pm 1.8	(22)	22.8	(1)	24	(1)	---	---	---	---	---
Cl	ug/g	---	---	876 \pm 64	(31)	880	750 - 1000	---	---	874 \pm 71	(22)	---	---	810	(2)	---	---	---	---	---
Cl	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Co	ug/g	6	---	5.6 \pm 0.6	(43)	5.7	3.9 - 7	6.1 \pm 0.8	(3)	5.8 \pm 0.5	(30)	---	---	6.75	(2)	---	---	---	---	---
Cr	ug/g	20.2 \pm 0.5	---	19.6 \pm 1.5	(47)	19.6	16 - 23	19.7 \pm 0.4	(8)	19.7 \pm 1.3	(28)	17 \pm 2	(6)	20	(2)	---	---	---	---	---
Cr	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Cs	ug/g	---	---	1.50 \pm 0.18	(24)	1.46	1.3 - 2.3	---	---	1.52 \pm 0.18	(22)	---	---	1.4	(1)	---	---	---	---	---
Cu	ug/g	18 \pm 2	---	17.4 \pm 2.2	(33)	17.4	13 - 23	18.2 \pm 1.6	(9)	15.8 \pm 1.5	(6)	17.6 \pm 1.4	(6)	18 \pm 4	(8)	16.7 \pm 1.7	(3)	---	---	24 (1) PAA
Cu	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	17 (1) OES
Dy	ug/g	---	---	1.23 \pm 0.2	(12)	1.2	0.85 - 1.59	1.3	(1)	1.2 \pm 0.2	(11)	---	---	---	---	---	---	---	---	---
Er	ug/g	---	---	5	(2)	---	0.7 - 9.3	0.7	(1)	9.3	(1)	---	---	---	---	---	---	---	---	---
Eu	ng/g	---	---	360 \pm 40	(26)	350	280 - 420	400	(1)	350 \pm 40	(23)	420	(1)	---	---	410	(1)	---	---	---
F	ug/g	---	---	80 \pm 10	(8)	80	65 - 91	---	---	---	---	---	---	---	---	81 \pm 11	(6)	---	---	71 (1) IC

TABLE 1632-1: COMPILED DATA FOR NBS SRM 1632 TRACE ELEMENTS IN COAL (cont.)

ELE	UNITS	NBS		MEDIAN	RANGE	AA		NAA		ICPES		XRF		OTHER METHODS		Mean	(n)	Method
		Mean	SD			Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD			
Fe	ug/g	8700 ± 300		8440	7517 - 9300	8700 ± 370	(4)	8560 ± 470	(27)	8300 ± 400	(8)	7900 ± 700	(6)	8695	(2)	8600	(1)	POL
Fe	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	8420	(1)	---	---	TCGS
Ga	ug/g	---	---	5.8	4.5 - 8.5	---	---	5.5 ± 0.8	(13)	---	---	7.1 ± 1.3	(4)	6.2	(1)	---	---	OES
Gd	ug/g	---	---	2.5	1.2 - 3.62	1.2	(1)	3.2 ± 0.5	(5)	1.2	(1)	3	(1)	1.82	(2)	---	---	TCGS
Ge	ug/g	---	---	2.7	2 - 3	---	---	2	(1)	2.3	(1)	3.6 ± 1.2	(3)	2.7	(1)	---	---	OES
H	%	---	---	4.28	4.02 - 4.57	---	---	---	---	---	---	---	---	4.42	(2)	4.16	(2)	TCGS
H2O-	%	---	---	---	---	---	---	---	---	---	---	---	---	2.6	(1)	---	---	FD
Hf	ug/g	---	---	0.96	0.81 - 1.15	---	---	0.98 ± 0.10	(21)	---	---	---	---	---	---	---	---	---
Hg	ug/g	120 ± 20		117	70 - 180	118 ± 14	(8)	150 ± 50	(13)	---	---	---	---	100	(3)	---	---	PAA
Ho	ng/g	---	---	250	240 - 270	250	(1)	252 ± 15	(4)	---	---	---	---	---	---	---	---	---
I	ug/g	---	---	3.3	2.68 - 4	---	---	3.4 ± 1.1	(10)	---	---	3	(1)	3.3	(2)	---	---	PAA
In	ng/g	---	---	30	16.9 - 70	---	---	35 ± 21	(7)	---	---	---	---	---	---	---	---	---
Ir	ng/g	---	---	2.5	2.48 - 3.53	---	---	2.8 ± 0.6	(3)	---	---	---	---	---	---	---	---	---
K	ug/g	---	---	2800	2410 - 3100	2570	(1)	2830 ± 130	(25)	2675 ± 190	(8)	2410	(1)	---	---	3100	(1)	OES
K	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	2700	(1)	2840	(1)	GAMMA
La	ug/g	---	---	10.6	9.1 - 11.5	10	(1)	10.6 ± 0.6	(26)	10.35	(2)	10	(1)	11	(1)	---	---	TCGS
Li	ug/g	---	---	25	24 - 28.7	25	(1)	---	---	28.7	(1)	---	---	24	(1)	---	---	OES
Lu	ng/g	---	---	130	100 - 150	100	(1)	134 ± 12	(13)	---	---	---	---	---	---	---	---	OES
Mg	ug/g	---	---	1600	980 - 2480	---	---	1760 ± 490	(16)	1260 ± 180	(8)	---	---	1600	(2)	1600	(1)	OES
Mn	ug/g	40 ± 3		41.1	36 - 46	40 ± 3	(7)	41.8 ± 2.2	(29)	41.8 ± 2.9	(6)	37.8 ± 1.1	(5)	45.0	(2)	36	(1)	OES
Mn	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	43.5	(1)	TCGS
Mo	ug/g	---	---	3.4	3.08 - 5	---	---	3.8 ± 0.9	(6)	4	(2)	4	(1)	0.26 ± 0.05	(5)	3.6	(1)	OES
N	%	---	---	1.2	1.01 - 1.3	---	---	---	---	---	---	---	---	1.3	(1)	1.25	(2)	TCGS
N	%	---	---	---	---	---	---	---	---	---	---	---	---	1.01	(1)	---	---	---
Na	ug/g	---	---	380	325 - 439	480	(1)	384 ± 24	(27)	374 ± 41	(8)	390	(1)	350	(2)	---	---	PAA
Nb	ug/g	---	---	---	---	---	---	---	---	---	---	5	(1)	---	---	---	---	---
Nd	ug/g	---	---	9.5	6.4 - 11.3	8	(1)	9.1 ± 1.6	(5)	9.5	(1)	7	(1)	11.3	(1)	---	---	TCGS
Ni	ug/g	15 ± 1		14.8	11 - 19	14.6 ± 1.5	(6)	16 ± 3	(15)	15.2 ± 2.5	(6)	14.2 ± 2.4	(6)	13.9 ± 0.2	(5)	15	(1)	OES
Ni	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	14.73 ± 0.06	(3)	14.8	(1)	POL
Ni	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	15.2	(2)	15.05	(1)	SSMS
O	%	---	---	---	10.08 - 15.05	---	---	---	---	---	---	---	---	---	---	10.08	(1)	CALC
Os	ug/g	---	---	---	---	---	---	< 1		---	---	---	---	---	---	---	---	---

TABLE 1632-1: COMPILED DATA FOR NBS SRM 1632 TRACE ELEMENTS IN COAL (cont.)

ELE	UNITS	NBS		CONSENSUS		MEDIAN	RANGE	AA		NAA		ICPES		XRF		OTHER METHODS		Mean	(n)	Method
		Mean ±	SD	Mean ±	SD			(n)	Mean ±	SD	(n)	Mean ±	SD	(n)	Mean ±	SD	(n)			
P	ug/g	---	---	140 ± 40	(10)	137	92 - 250	---	---	---	---	125 ± 24	(7)	138	(1)	260	(2)	COLOR	---	---
Pb	ug/g	30 ± 9	---	28 ± 4	(34)	28	19.1 - 36	29 ± 3	(11)	---	---	24 ± 8	(6)	24 ± 8	(5)	30 ± 2	(7)	PAA	28.7	(2)
Pb	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	30 ± 3	(3)	SSMS	28.4	(1)
Pd	ng/g	---	---	< 5	---	---	---	---	---	< 5	---	---	---	---	---	---	---	---	---	---
Pr	ug/g	---	---	3.8 ± 1.3	(4)	3.6	2 - 4.9	---	---	4.4 ± 0.7	(3)	---	---	2	(1)	---	---	---	---	---
Pt	ng/g	---	---	228	(2)	---	186 - 270	---	---	228	(2)	---	---	---	---	---	---	---	---	---
Rb	ug/g	---	---	20.5 ± 2.2	(30)	20	16.3 - 24.7	---	---	20.5 ± 2.3	(23)	---	---	20 ± 3	(4)	20	(2)	PAA	22	(1)
Rh	ug/g	---	---	< 5	---	---	---	---	---	---	---	---	---	---	---	< 5	---	---	---	---
Ru	ng/g	---	---	18	(1)	---	---	---	---	18	(1)	---	---	---	---	---	---	---	---	---
S	%	---	---	1.32 ± 0.08	(11)	1.32	1.22 - 1.52	---	---	---	---	0.9	(1)	1.35 ± 0.12	(4)	1.30	(2)	TCGS	---	---
S	%	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1.22 ± 0.21	(4)	CB	1.26	(2)
Sb	ug/g	---	---	3.4 ± 0.6	(37)	3.4	2.2 - 4.45	3.3 ± 1.3	(3)	3.4 ± 0.5	(29)	---	---	3	(1)	3.6 ± 0.5	(3)	PAA	2.3	(1)
Sc	ug/g	---	---	3.8 ± 0.2	(30)	3.8	3.4 - 4.2	---	---	3.8 ± 0.2	(24)	3.8	(2)	4.1	(1)	3.59	(2)	PAA	3.6	(1)
Se	ug/g	2.9 ± 0.3	---	3.0 ± 0.4	(50)	3	2.3 - 3.9	2.3	(2)	3.1 ± 0.4	(32)	2.9	(1)	3.02 ± 0.10	(4)	3.01 ± 0.01	(5)	PAA	3	(1)
Se	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2.86	(1)
Se	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	3.05	(1)	ASV	2.86	(2)
Se	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2.75	(2)	SSMS	4.7	(1)
Si	%	3.2	---	3.08 ± 0.24	(12)	3.14	2.6 - 3.5	2.9	(2)	3.12	(1)	3.08 ± 0.22	(5)	3.19	(1)	3.00	(1)	PAA	3.5	(1)
Si	%	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2.95	(1)
Sm	ug/g	---	---	1.6 ± 0.2	(26)	1.66	1.3 - 1.93	1.4	(1)	1.64 ± 0.18	(23)	1.3	(1)	---	---	1.53	(1)	TCGS	---	---
Sn	ug/g	---	---	9.3 ± 1.8	(9)	10	5 - 11	---	---	10	(1)	7.2 ± 2.9	(3)	5	(1)	10.2 ± 0.4	(5)	PAA	---	---
Sr	ug/g	---	---	150 ± 20	(34)	150	99 - 190	99	(1)	146 ± 28	(26)	139 ± 3	(3)	146 ± 10	(6)	140	(1)	PAA	---	---
Ta	ng/g	---	---	250 ± 40	(18)	240	170 - 350	---	---	250 ± 40	(18)	---	---	---	---	---	---	---	---	---
Tb	ng/g	---	---	280 ± 70	(12)	260	200 - 400	---	---	280 ± 70	(12)	---	---	---	---	---	---	---	---	---
Te	ng/g	< 100	---	710 ± 280	(3)	600	500 - 1020	500	(1)	600	(1)	---	---	---	---	1020	(1)	PAA	---	---
Th	ug/g	3	---	3.16 ± 0.23	(24)	3.2	2.7 - 3.65	---	---	3.16 ± 0.21	(20)	---	---	2.85	(2)	3.45	(2)	GAMMA	---	---
Ti	ug/g	800	---	940 ± 120	(39)	946	680 - 1200	840 ± 170	(3)	990 ± 115	(19)	920 ± 60	(7)	1000 ± 240	(5)	920 ± 45	(3)	PAA	900	(1)
Ti	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	890	(1)	TCGS	790	(1)
Tl	ng/g	590 ± 30	---	550 ± 50	(8)	520	500 - 610	---	---	---	---	---	---	---	---	530 ± 40	(5)	PAA	600 ± 10	(3)
Tm	ng/g	---	---	300 ± 1	(4)	300	300 - 300	---	---	300 ± 1	(4)	---	---	---	---	---	---	---	---	---
U	ug/g	1.4 ± 0.1	---	1.37 ± 0.13	(32)	1.4	1.1 - 1.6	---	---	1.37 ± 0.14	(23)	---	---	2	(1)	1.42 ± 0.13	(5)	PAA	1.2	(2)
U	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1.41	(2)
V	ug/g	35 ± 3	---	34 ± 2	(41)	34	30 - 40	35 ± 2	(7)	34.5 ± 2.2	(23)	33.8 ± 2.3	(6)	35	(2)	34	(2)	PAA	32	(1)
W	ng/g	---	---	740 ± 65	(11)	740	630 - 870	---	---	740 ± 60	(11)	---	---	---	---	---	---	---	---	---
Y	ug/g	---	---	7.5 ± 0.6	(8)	7.4	6.6 - 8.3	7	(1)	---	---	7.45	(2)	7.4 ± 0.4	(3)	7.8	(2)	OES	---	---
Yb	ng/g	---	---	790 ± 130	(23)	790	550 - 1030	700	(1)	800 ± 130	(20)	670	(1)	---	---	910	(1)	OES	---	---
Zn	ug/g	37 ± 4	---	37 ± 3	(52)	37	30 - 45	37.3 ± 1.8	(9)	36 ± 3	(20)	38.8 ± 1.6	(5)	35.8 ± 2.3	(8)	37.6 ± 1.2	(6)	PAA	45	(1)
Zn	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	35	(2)	SSMS	38.1	(1)
Zr	ug/g	---	---	34 ± 10	(10)	33	16 - 46	46	(1)	38 ± 7	(4)	25	(1)	36	(2)	16	(1)	PAA	25	(1)

TABLE 1632-2: INDIVIDUAL DATA FOR NBS SRM 1632 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ag (ng/g)</u>					<u>Al (%) cont.</u>				
<	100		ITNA	75RUC 01	1.98	0.1		XRF	79PRA 01
<	140	L	ITNA	77MAE 01	2.1	1.05		OES	76WEW 01
<	150	L	OES	76WEW 01	2.21			ITNA	77GLU 01
<	200	L	ITNA	77CAH 01	3	0.1		ITNA	82SUZ 02
<	200	L	ICPES	81CHU 01	<u>As (ug/g)</u>				
<	220	L	ITNA	82SUZ 02	3	2		EXRF	73SPA 01
<	400	L	PAA	76CHA 01	4.5	0.4		ITNA	75RIC 01
45	5		RTNA	77NAD 02	4.6	0.3		ITNA	78NAD 02
60	30		ITNA	75OND 01	4.61	0.32		ITNA	75NAD 02
60	30		ITNA	73ABE 01	4.7	0.5		ITNA	78MAC 01
70	34		SSMS	77PAU 01	4.7	1		EXRF	79GIA 01
80			AA	76WEW 01	5	0.6	H	OES	80CLA 01
1050	100		PAA	74CHA 01	5.1	0.5		ITNA	76KUC 01
<u>Al (%)</u>					5.31			ICPES	81NAD 01
1.51	0.08		NAA	76HAN 01	5.4	0.1		IENA	78WAN 01
1.57		4	AA	79REI 01	5.4	0.3		FAE	80DSI 01
1.57	0.155		ITNA	73SHE 01	5.4	0.5		COLOR	77ARU 01
1.59	0.2		ITNA	76RAG 01	5.5			ITNA	75KLE 01
1.6			ICPES	80NAD 01	5.58	0.73		FAA	82BEN 01
1.6	0.2	35	ITNA	81GLA 03	5.6			FAA	78GUI 01
1.62	0.13		ITNA	78MAC 01	5.6	0.2		ITNA	77ARU 01
1.64			ICPES	80NAD 01	5.6	0.36		FAA	77ARU 01
1.66			ICPES	80NAD 01	5.7			ITNA	77GLU 01
1.66	0.08		ICPES	84NAD 01	5.7			FAA	75POL 01
1.67	0.01	11	ICPES	85HAR 01	5.7			ITNA	78WEA 01
1.68	0.01		ITNA	83NDI 01	5.7	0.13		RTNA	75RUC 01
1.68	0.04	D	TCGS	80AND 01	5.7	0.2	H	FAE	79FEL 01
1.68	0.04		TCGS	79FAI 01	5.7	0.2		FAA	78HAY 01
1.69		11	ICPES	85HAR 01	5.7	0.5		ITNA	79FRU 01
1.71	0.05		ITNA	77MAE 01	5.7	0.5		ITNA	73ABE 01
1.71	0.07		ITNA	78LAU 02	5.75	0.37		PAA	74CHA 01
1.72	0.09		ITNA	75RIC 01	5.8	0.3		PAA	76CHA 01
1.73	0.04		ITNA	76BLO 01	5.8	0.3		ITNA	76RAG 01
1.74	0.04		ITNA	77ROW 03	5.8	0.3		ITNA	77MAE 01
1.74	0.04	D	NAA	79STE 01	5.8	0.3		PAA	77JER 01
1.74	0.4		ITNA	76STE 05	5.8	0.4		RTNA	74ORV 01
1.76	0.31		ITNA	78NAD 02	5.8	0.5		ITNA	76BLO 01
1.76	0.31		ITNA	75NAD 02	5.9	0.3		ITNA	79GRE 01
1.78	0.08		ITNA	73ABE 01	5.9	0.4		ITNA	81WAN 01
1.8			ITNA	84CLE 01	5.9	0.5		ITNA	73SHE 01
1.8	0.18		ITNA	76WEW 01	6.0	0.3		ITNA	78LAU 02
1.82	0.06		ICPES	81CHU 01	6.1	0.3		GCMES	75TAL 01
1.85			ITNA	78WEA 01	6.1	0.4		ITNA	77ROW 04
1.85	0.08		ITNA	79GRE 01	6.1	0.5		XRF	79FRU 01
1.85	0.13		ITNA	75OND 01	6.1	0.55		ITNA	77JER 01
1.85	0.13		FAA	77PIL 01	6.1	1.4		ITNA	75OND 01
1.86			ICPES	80NAD 01	6.2	0.8	6	PAA	82SEG 01
1.9			ITNA	75KLE 01	6.2	1.3		ITNA	77CAH 01
1.9	0.19		ITNA	81WAN 01	6.27	0.89		RTNA	77JER 01

TABLE 1632-2: INDIVIDUAL DATA FOR NBS SRM 1632 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>As (ug/g) cont.</u>					<u>Ba (ug/g)</u>				
6.3	0.2		IENA	77ROW 04	87	5	9	ITNA	82SUZ 02
6.3	0.2	D	NAA	79STE 01	104	5	9	ITNA	82SUZ 02
6.3	0.3		ITNA	85FIL 01	152	37		ICPES	84NAD 01
6.3	1	6	PAA	82SEG 01	183			ICPES	80NAD 01
6.3	1		PAA	80SEG 01	256			ICPES	80NAD 01
6.4	0.2		IENA	77ROW 03	274	31		ITNA	76STE 05
6.5	0.3		NAA	76HAN 01	280			ITNA	75MIL 01
6.5	0.5		ICPES	80HAA 01	300	60		ITNA	78LAU 02
6.5	1.2		IENA	76STE 05	301		34	WXRf	82MIL 01
6.5	1.4	D	NAA	74OND 01	302	8		ITNA	76RAG 01
6.6		34	WXRf	82MIL 01	306	20		IENA	77ROW 04
6.6	1.3		ITNA	76WEW 01	306	20	D	NAA	79STE 01
7			AA	76WEW 01	309	24		ITNA	77ROW 04
8	2		PAA	75OND 01	310		11	ICPES	85HAR 01
8.9	0.2		ITNA	82SUZ 02	310		35	ITNA	81GLA 03
8.9	0.5		ITNA	75RUC 01	310	10	11	ICPES	85HAR 01
					310	30		ITNA	78MAC 01
					311	25		ITNA	75NAD 02
					311	25		ITNA	78NAD 02
12.17			CB	79PRA 01	314	20		PAA	74CHA 01
13.2		34	CB	82MIL 01	314	43		ITNA	81WAN 01
					315	20		PAA	76CHA 01
					320	20		NAA	76HAN 01
					320	77		ITNA	85FIL 01
<	1	L	ITNA	77CAH 01	322	20		IENA	77ROW 03
<	20		ITNA	75RUC 01	337	42		ITNA	73SHE 01
<	30	L	ITNA	73ABE 01	338	13.8		IENA	76STE 05
<	300	L	ICPES	81CHU 01	338	14	D	NAA	79STE 01
0.85	0.03		RTNA	77NAD 02	345	70		ITNA	76WEW 01
0.99	0.16		RTNA	77NAD 01	350			ITNA	78WEA 01
146	48		ITNA	73SHE 01	350	20		ITNA	77MAE 01
200			ITNA	78WEA 01	350	30		ITNA	79GRE 01
					352	30		ITNA	75OND 01
					354	84		ITNA	79ROS 03
					360	20	9	ITNA	78LAU 02
29			ICPES	81NAD 01	366	34		ITNA	75RUC 01
30	1.1		OES	76WEW 01	385	40		ITNA	77CAH 01
42.1	0.7		TCGS	79FAI 01	390	20		ITNA	73ABE 01
42.1	0.7	D	TCGS	80AND 01	390	40		ITNA	79FRU 01
43			VV	77GLU 01	405			ITNA	75KLE 01
47	1.6	6	TCGS	76GLA 01	410	82		OES	76WEW 01
47.7	1.6	6	TCGS	76GLA 01					
47.7	1.8	6	TCGS	76GLA 01					
118			ITNA	77GLU 01					

TABLE 1632-2: INDIVIDUAL DATA FOR NBS SRM 1632 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Be (ug/g)</u>					<u>Br (ug/g) cont.</u>				
1.1	0.47		ICPES	84NAD 01	19	4		ITNA	75RIC 01
1.2	0.07		OES	76WEW 01	19.2	0.6		ITNA	77ROW 04
1.24			FAA	75POL 01	19.2	1.2		ITNA	77MAE 01
1.49	0.03		FLUOR	77WIC 01	19.3			ITNA	78WEA 01
1.5			AA	76WEW 01	19.3	1.9		ITNA	75OND 01
1.5	0.1		FAA	75OWE 01	19.5	0.3		IENA	76STE 05
1.52	0.11	6	FAA	77GLA 02	19.6	0.4	D	NAA	79STE 01
1.56	0.07	11	AA	82LIN 03	19.6	0.4	D	IENA	77ROW 04
1.57	0.12	6	FAA	77GLA 02	19.6	0.4		IENA	77ROW 03
1.63	0.05	11	AA	82LIN 03	20			ITNA	77GLU 01
1.69	0.07	11	AA	82LIN 03	20	2		ITNA	79GRE 01
1.7		4	AA	79REI 01	20	3		ITNA	73SHE 01
1.7			ITNA	77GLU 01	23.7	3.2		EXRF	73SPA 01
1.7	0.03		ICPES	81CHU 01	38	1		ITNA	82SUZ 02
1.7	0.4	35	FAA	76GLA 02	<u>C (%)</u>				
1.77			ICPES	80NAD 01	68.93	0.11		CB	80SCH 02
1.85			ICPES	80NAD 01	69.6	2.1	35	CB	79GLA 04
<u>Bi (ug/g)</u>					70	5	D	TCGS	80AND 01
<	1	L	WXRF	82MIL 01	70	5		TCGS	79FAI 01
<	1	L	PAA	76CHA 01	71.7			CB	79PRA 01
<	1	L	AA	76WEW 01	73	3	35	TCGS	79GLA 04
<	1.5	L	OES	76WEW 01	<u>Ca (ug/g)</u>				
1.05			PAA	74CHA 01	2400	600		ITNA	82SUZ 02
<u>Br (ug/g)</u>					2840	80		GAMMA	75OND 01
7.8	5.8		ITNA	81WAN 01	3300	500	D	TCGS	80AND 01
14	2		ITNA	76STE 05	3300	500		TCGS	79FAI 01
14.2			ITNA	75KLE 01	3500	300	D	NAA	79STE 01
15	1		ITNA	78MAC 01	3500	300		ITNA	76STE 05
15.2	1.4		ITNA	75NAD 02	3500	2800		ITNA	77ROW 03
15.2	1.4		ITNA	78NAD 02	3600			ITNA	84CLE 01
15.6	0.4		ITNA	85GAU 04	3700	400		NAA	76HAN 01
16.2	1	5	IENA	79GLA 02	3890	40	11	ICPES	85HAR 01
16.6	0.6		NAA	76HAN 01	3940		11	ICPES	85HAR 01
17	1		ITNA	78LAU 02	4000			ICPES	80NAD 01
17	2		ITNA	79FRU 01	4030	480		14NAA	77VAN 01
17	2		ITNA	73ABE 01	4070	560		ITNA	73SHE 01
17	2		XRF	79FRU 01	4100	400		ITNA	79GRE 01
17.2			ITNA	76RAG 01	4100	500		ITNA	81WAN 01
17.4	1.1		IENA	84GLA 02	4140	140		ICPES	81CHU 01
17.5	0.3		EXRF	79GIA 01	4200			ICPES	80NAD 01
17.9	0.3	5	IENA	79GLA 02	4200	300		ITNA	77MAE 01
18		34	WXRF	82MIL 01	4200	400		PAA	76CHA 01
18	2		ITNA	76KUC 01	4200	500		XRF	79FRU 01
18.2	2.3		ITNA	75RUC 01	4200	500		ITNA	75OND 01
18.8	0.9		ITNA	83NDI 01	4200	600		ITNA	76RAG 01
18.8	2.4		ITNA	77CAH 01	4300	200		ITNA	78NAD 02
19	1		XRF	79PRA 01	4300	200		ITNA	75NAD 02

TABLE 1632-2: INDIVIDUAL DATA FOR NBS SRM 1632 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ca (ug/g) cont.</u>					<u>Ce (ug/g)</u>				
4400			ITNA	75KLE 01	17.34	0.089		ITNA	73SHE 01
4400	100		ICPES	84NAD 01	18.5			ITNA	75KLE 01
4400	900		ITNA	76WEW 01	18.8	1		ITNA	76RAG 01
4420	120		XRF	79PRA 01	19	0.7		ITNA	85FIL 01
4500			ICPES	80NAD 01	19	1		ITNA	78LAU 02
4700	600		PAA	75OND 01	19.5	0.7	D	ITNA	77ROW 04
4950		4	AA	79REI 01	19.5	0.7		ITNA	77ROW 03
5000			ICPES	80NAD 01	19.5	0.7		ITNA	77MAE 01
5100	1000		OES	76WEW 01	19.5	0.7	D	NAA	79STE 01
5300		35	ITNA	81GLA 03	19.5	1		ITNA	75OND 01
7000			ITNA	77GLU 01	19.7	0.2		ITNA	76WEW 01
					19.7	0.56		ITNA	75NAD 02
					19.7	0.6		ITNA	78NAD 02
					20			ITNA	75MIL 01
170	6	7	FAA	85FUD 01	20	1.2		PAA	76CHA 01
170	36		SSMS	77PAU 01	20.1	3.7		ITNA	77CAH 01
180	10		AF	75EPS 01	20.4	0.3		ITNA	84ODD 01
180	14		AF	74RAI 01	20.6	0.2		RTNA	84ODD 01
180	20	D	TCGS	80AND 01	21	1		ITNA	79GRE 01
180	20		TCGS	79FAI 01	21.2	3.5		ITNA	81WAN 01
180	40	6	PAA	82SEG 01	21.5	1.7		NAA	76HAN 01
190			POL	74MAI 01	21.5	1.8		ITNA	83HDI 01
190	2	7	FAA	85FUD 01	22.6	2.2		ITNA	77ROW 04
199	20		PAA	74CHA 01	22.8	0.5		ICPES	81CHU 01
200	20		RTNA	77JER 01	23			OES	82GUP 02
200	20		PAA	77JER 01	23.3	2.7		ITNA	75RUC 01
200	20		PAA	76CHA 01	24		34	WXRF	82MIL 01
200	50	6	TCGS	76GLA 01	26	5		ITNA	78MAC 01
200	100	6	PAA	82SEG 01	29	1	12	ITNA	82SUZ 02
210	10		FAA	77GLU 01	29	1	12	ITNA	82SUZ 02
210	20		FAA	74RAI 01	30	15		OES	76WEW 01
230	10	7	AA	73TAL 01					
230	10		FAA	74TAL 01					
230	20		RTNA	74ORV 01					
230	20		RTNA	84DEL 01	80	20		ITNA	73ABE 01
230	21	8	SSMS	80KOP 01	750	75		ITNA	73SHE 01
240	30		FAA	74TAL 01	760		35	ITNA	81GLA 03
240	30	7	AA	73TAL 01	800	50		ITNA	78MAC 01
250			FAA	78GUI 01	810		34	WXRF	82MIL 01
250			FAA	75POL 01	810	30		ITNA	82SUZ 02
250	70		PAA	80SEG 01	811	5		XRF	79PRA 01
310			IDMS	75KLE 01	817	96		ITNA	81WAN 01
310			AA	76WEW 01	828	22		ITNA	76RAG 01
400	200		SSMS	77DON 01	844	37		ITNA	77ROW 03
700	350		OES	76WEW 01	844	37		ITNA	76STE 05
					844	37	D	NAA	79STE 01
					846	44		ITNA	75RUC 01
					850	40		IC	85GEN 01
					850	150		ITNA	79FRU 01
					860	54		ITNA	77CAH 01
					866	40		ITNA	75RIC 01

TABLE 1632-2: INDIVIDUAL DATA FOR NBS SRM 1632 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Cl (ug/g) cont.</u>					<u>Co (ug/g) cont.</u>				
880			ITNA	84GLA 02	5.8	0.6		ITNA	85FIL 01
890			ITNA	78WEA 01	5.9			ITNA	75KLE 01
890	50		ITNA	79GRE 01	5.9	0.5		AA	79ROS 03
890	100		PAA	76CHA 01	6	0.02		ITNA	78MAC 01
890	125		ITNA	75OND 01	6	0.2		ITNA	79GRE 01
895	15	D	TCGS	80AND 01	6.01	0.16		ITNA	77ROW 04
895	15		TCGS	79FAI 01	6.1	0.1		ITNA	77MAE 01
915			ISE	81NAD 01	6.2			ITNA	75MIL 01
915			IC	83NAD 01	6.39	0.74		ITNA	81WAN 01
920	30		NAA	76HAN 01	6.5	0.2		ITNA	82SUZ 02
930			ISE	83NAD 01	6.57	0.47		NAA	76HAN 01
930	48		PAA	74CHA 01	6.6			ITNA	84CLE 01
945	35		ITNA	75NAD 02	6.9		35	ITNA	81GLA 03
945	35		ITNA	78NAD 02	7			AA	76WEW 01
990	20		ITNA	77MAE 01	8.5	4.2		EXRF	79GIA 01
1000			ITNA	77GLU 01	11			ITNA	77GLU 01
1000			ITNA	75KLE 01					
1177			ISE	80NAD 01					
<u>Co (ug/g)</u>					<u>Cr (ug/g)</u>				
					8			EXRF	82KEE 01
					9	2		XRF	79PRA 01
3.9	0.2		ICPES	81CHU 01	14.1	3.2		ICPES	84NAD 01
4.3		11	ICPES	85HAR 01	15			ICPES	80NAD 01
4.7	0.32		OES	76WEW 01	16		11	ICPES	85HAR 01
4.8	0.3		ITNA	76BLO 01	16	1.2		OES	76WEW 01
4.9			ICPES	80NAD 01	17	1		ITNA	75RIC 01
5.0		34	WXRF	82MIL 01	17	1	11	ICPES	85HAR 01
5.1	0.6		ITNA	78NAD 02	17.6	1		ITNA	76RAG 01
5.13	0.57		ITNA	75NAD 02	17.8	2		ITNA	77CAH 01
5.2	0.1		ITNA	79FRU 01	18			ICPES	80NAD 01
5.2	0.4		ITNA	73ABE 01	18	2		XRF	79FRU 01
5.3	0.4		ITNA	76KUC 01	18.3	1.8		ITNA	85FIL 01
5.31	0.41		ITNA	83NDI 01	18.5	1.7		ITNA	78MAC 01
5.4		4	AA	79REI 01	18.8	1.1		ITNA	76BLO 01
5.46	0.2		ITNA	79ROS 03	18.9	2.2		ITNA	75NAD 02
5.48	0.15		ITNA	73SHE 01	18.9	2.2		ITNA	78NAD 02
5.5	0.3		ITNA	77CAH 01	19			AA	76WEW 01
5.5	0.4		PAA	74CHA 01	19	0.8		ITNA	73SHE 01
5.5	0.6		ICPES	84NAD 01	19	2		ITNA	79FRU 01
5.51	0.6		ITNA	76RAG 01	19	2		ITNA	73ABE 01
5.58	0.21		ITNA	75RUC 01	19	2.8		ITNA	79ROS 03
5.6	0.4		PAA	76CHA 01	19	3		SSMS	77DON 01
5.7			ITNA	78WEA 01	19.4			FAA	75POL 01
5.7	0.1		ITNA	78LAU 02	19.4	1.3	11	AA	82LIN 03
5.7	0.12		ITNA	77ROW 03	19.5	0.8		PAA	76CHA 01
5.7	0.12	D	NAA	79STE 01	19.6	0.5		ITNA	77MAE 01
5.7	0.12		IENA	77ROW 04	19.6	0.6		AA	79ROS 03
5.7	0.3	11	ICPES	85HAR 01	19.7	0.9	D	NAA	74OND 01
5.7	0.4		ITNA	75OND 01	19.7	0.9		ITNA	75OND 01
5.78			ICPES	80NAD 01	19.8			FAA	78GUI 01
5.8	0.6		ITNA	76WEW 01	20			AA	78GUI 01

TABLE 1632-2: INDIVIDUAL DATA FOR NBS SRM 1632 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Cr (ug/g) cont.</u>					<u>Cs (ug/g) cont.</u>				
20			ITNA	84CLE 01	1.8		35	ITNA	81GLA 03
20	1	9	ITNA	78LAU 02	1.8	0.1		NAA	76HAN 01
20	3		ITNA	78LAU 02	1.8	0.3		ITNA	75RUC 01
20.17	0.76		RTNA	74MCC 01	1.8	0.3		ITNA	77CAH 01
20.2	0.4		AA	74RAI 01	1.9	0.2		ITNA	81WAN 01
20.3	1.4	11	AA	82LIN 03	2.3	0.1		ITNA	82SUZ 02
20.3	2.9		ITNA	75RUC 01	2.55	0.06		ITNA	73SHE 01
20.5	0.6		ITNA	79GRE 01	2.6			ITNA	75MIL 01
20.6			ITNA	75MIL 01	3.5	1.3		ITNA	78MAC 01
20.6	2.3		IENA	77ROW 04	<u>Cu (ug/g)</u>				
20.8	0.6		ICPES	81CHU 01	13			EXRF	82KEE 01
20.8	0.8		ITNA	77ROW 03	14.1	0.9		ITNA	73SHE 01
20.8	0.8	D	NAA	79STE 01	15	1.2		ITNA	77ROW 03
20.8	0.8	D	ITNA	77ROW 04	15	1.2	D	NAA	79STE 01
21	2		ITNA	75KLE 01	15	1.2		ITNA	76STE 05
21.5			ITNA	78WEA 01	15	2		XRF	79FRU 01
21.5	1		NAA	76HAN 01	15	3		SSMS	77DON 01
21.6	2		ITNA	76WEW 01	15.1	0.7	11	ICPES	85HAR 01
21.6	2.1		PAA	74CHA 01	15.7	2.7		ITNA	81WAN 01
22			ITNA	77GLU 01	16.3			FAA	78GUI 01
22	8		EXRF	79GIA 01	16.8			AA	78GUI 01
23		4	AA	79REI 01	16.8	1	8	SSMS	80KOP 01
24	3		ITNA	76KUC 01	17	0.3		AA	73TAL 01
25.2	3.8		ITNA	81WAN 01	17	1	35	RTNA	77GLA 01
32.3	0.9	12	ITNA	82SUZ 02	17	4		EXRF	81KIN 01
34.9	0.9	12	ITNA	82SUZ 02	17	7.5		OES	76WEW 01
<u>Cs (ug/g)</u>					17.1	0.2	11	AA	82LIN 03
0.35	0.04		PAA	74CHA 01	17.2	0.5		ICPES	81CHU 01
1.3	0.1		PAA	76CHA 01	17.4		11	ICPES	85HAR 01
1.3	0.2		ITNA	78LAU 02	17.7	1.5		EXRF	79GIA 01
1.32	0.11		ITNA	78NAD 02	17.9	0.2		AA	74RAI 01
1.32	0.11		ITNA	75NAD 02	18			ICPES	80NAD 01
1.36	0.1		IENA	76STE 05	18			XRF	75KLE 01
1.4			ITNA	75KLE 01	18		34	WXRF	82MIL 01
1.4		34	WXRF	82MIL 01	18.1	0.8		NAA	76HAN 01
1.4			ITNA	78WEA 01	18.4	0.3	11	AA	82LIN 03
1.4	0.08		ITNA	76RAG 01	18.4	1.1		SSMS	77PAU 01
1.4	0.1		ITNA	73ABE 01	19			ICPES	80NAD 01
1.4	0.1	9	ITNA	78LAU 02	19	3		ICPES	84NAD 01
1.4	0.1		ITNA	75OND 01	19.4	1.9		FAA	74RAI 01
1.4	0.3		ITNA	76WEW 01	20		4	AA	79REI 01
1.46	0.11		IENA	77ROW 03	21			AA	76WEW 01
1.49	0.22		ITNA	77ROW 04	22.6	3		EXRF	73SPA 01
1.52	0.11		IENA	77ROW 04	23			ITNA	77GLU 01
1.52	0.11	D	NAA	79STE 01	24	3		XRF	79PRA 01
1.6	0.1		ITNA	85FIL 01	24	3	6	PAA	82SEG 01
1.6	0.2		ITNA	79GRE 01	30	10	6	PAA	82SEG 01
1.71	0.04		ITNA	77MAE 01	30	10		PAA	80SEG 01
1.73	0.09		ITNA	79ROS 03					

TABLE 1632-2: INDIVIDUAL DATA FOR NBS SRM 1632 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Dy (ug/g)</u>					<u>Eu (ng/g) cont.</u>				
0.57	0.04		NAA	76HAN 01	410	60		OES	76WEW 01
0.85	0.06		ITNA	73SHE 01	420	10		ITNA	77MAE 01
1	0.1		ITNA	78MAC 01	420	20		ICPES	81CHU 01
1.1	0.1		RTNA	84ODD 01	480	90		ITNA	81WAN 01
1.12	0.06	D	NAA	79STE 01	500	60		ITNA	82SUZ 02
1.12	0.06		ITNA	76STE 05					
1.12	0.06		ITNA	77ROW 03					
1.2	0.2		ITNA	84ODD 01					
1.3			AA	82GUP 02	51			ITNA	77GLU 01
1.3	0.5		ITNA	75RUC 01	65			ISE	83KNA 01
1.38	0.09		ITNA	75NAD 02	71			IC	83NAD 01
1.4			ITNA	75MIL 01	71			ISE	81NAD 01
1.4	0.1		ITNA	78NAD 02	80	4		ISE	74THO 01
1.59	0.16		ITNA	77CAH 01	81			VV	77GLU 01
2.4	0.2		ITNA	82SUZ 02	87			ISE	74THO 01
					90			ISE	83NAD 01
					91	5		ISE	83BET 02
					100			AA	76WEW 01
<u>Er (ug/g)</u>					<u>Fe (ug/g)</u>				
<	3	L	WXRF	82MIL 01					
<	15	L	OES	76WEW 01					
0.7			AA	82GUP 02					
9.3	0.2		RTNA	84ODD 01	6500	1300		OES	76WEW 01
					7000	400		ITNA	76BLO 01
					7150	800		EXRF	73SPA 01
					7200			EXRF	82KEE 01
					7517	119		ITNA	73SHE 01
210			ITNA	75KLE 01	7600	100		ICPES	84NAD 01
270	20		ITNA	76RAG 01	7790	360		EXRF	79GIA 01
280	10		ITNA	73ABE 01	7800	200		ITNA	75RIC 01
299	33		ITNA	76STE 05	7800	350		XRF	79FRU 01
300	100		ITNA	78MAC 01	7900			ITNA	84CLE 01
312	37		ITNA	73SHE 01	8000			ICPES	80NAD 01
330			ITNA	78WEA 01	8100	500		ITNA	79FRU 01
330	40		ITNA	75OND 01	8100	700		ITNA	73ABE 01
340	10		NAA	76HAN 01	8200			ICPES	80NAD 01
340	14		ITNA	83NDI 01	8230	80	11	ICPES	85HAR 01
340	20		ITNA	78LAU 02	8300			ICPES	80NAD 01
340	40		ITNA	77ROW 03	8300	600		ITNA	85FIL 01
340	50		ITNA	84ODD 01	8300	700		ITNA	76KUC 01
344	15		ITNA	79ROS 03	8350	120		AA	79ROS 03
350	30		RTNA	84ODD 01	8380	405		ITNA	83NDI 01
360	30		ITNA	77CAH 01	8400			ITNA	75KLE 01
370	20		ITNA	78NAD 02	8400	200	D	TCGS	80AND 01
370	20		ITNA	75NAD 02	8400	200		ITNA	78LAU 02
370	40		ITNA	76WEW 01	8400	200		ITNA	76RAG 01
380	40	D	NAA	79STE 01	8400	200		ITNA	75OND 01
380	40		ITNA	77ROW 04	8400	400		ITNA	74OND 01
380	40		ITNA	79GRE 01	8400	400	D	NAA	77ROW 04
390	40		ITNA	85FIL 01	8410	250		IENA	79FAI 01
400			AA	82GUP 02	8420	240		TCGS	85HAR 01
400			ITNA	75MIL 01	8440		11	ICPES	75NAD 02
410	30		ITNA	75RUC 01	8500	60		ITNA	

TABLE 1632-2: INDIVIDUAL DATA FOR NBS SRM 1632 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Fe (ug/g) cont.</u>					<u>Gd (ug/g)</u>				
8500	600		ITNA	78NAD 02	1.2			AA	82GUP 02
8527			AA	78GUI 01	1.2	0.06		ICPES	81CHU 01
8600			POL	74MAI 01	1.43	0.05		TCGS	79FAI 01
8600			ITNA	78WEA 01	2.2	0.08		TCGS	80AND 01
8630	266		EXRF	81KIN 01	2.5			ITNA	75MIL 01
8690	410		PAA	74CHA 01	3		34	WXRF	82MIL 01
8700		35	ITNA	81GLA 03	3	0.9		ITNA	84ODD 01
8700	200		ITNA	79GRE 01	3.1	0.2		RTNA	84ODD 01
8700	400		PAA	76CHA 01	3.6	0.4		ITNA	78NAD 02
8730			AA	76WEW 01	3.62	0.35		ITNA	75NAD 02
8800			ICPES	80NAD 01	<u>Ge (ug/g)</u>				
8800	200		ITNA	77MAE 01	2			ITNA	77GLU 01
8810	210		ICPES	81CHU 01	2.3	0.1		ICPES	84NAD 02
8900	240		XRF	79PRA 01	2.4			UU	78SIM 01
8900	300		ITNA	78MAC 01	2.7	0.22		OES	76WEW 01
9000	200	D	NAA	79STE 01	2.9	0.2		EXRF	79GIA 01
9010	150		ITNA	77ROW 03	3		34	WXRF	82MIL 01
9010	190	D	ITNA	77ROW 04	5	1		XRF	79PRA 01
9030			ITNA	75MIL 01	14.9			FAA	75POL 01
9130	560		ITNA	79ROS 03	70	5		ITNA	73SHE 01
9200		4	AA	79REI 01	<u>H (%)</u>				
9200	300		NAA	76HAN 01	4.02	0.05		TCGS	79FAI 01
9200	700		ITNA	81WAN 01	4.02	0.05	D	TCGS	80AND 01
9300	800		ITNA	75RUC 01	4.28	0.03		CB	80SCH 02
9300	800		ITNA	77CAH 01	4.3	0.1	35	TCGS	79GLA 04
9800	1000		ITNA	76WEW 01	4.57			CB	79PRA 01
11100			ITNA	77GLU 01	<u>H2O-T (%)</u>				
11100	300	12	ITNA	82SUZ 02	2.6			FD	80KHA 02
11300	500	12	ITNA	82SUZ 02	<u>Hf (ug/g)</u>				
<u>Ga (ug/g)</u>					0.72	0.071		ITNA	79ROS 03
4.5			ITNA	77GLU 01	0.81	0.1		ITNA	78LAU 02
4.5	0.5		RTNA	75RUC 01	0.83	0.06		IENA	77ROW 03
4.8	0.2		IENA	78WAN 01	0.83	0.06	D	IENA	77ROW 04
5	1		ITNA	78MAC 01	0.83	0.06	D	NAA	79STE 01
5.15	0.3		ITNA	75RUC 01	0.89	0.02		ITNA	75NAD 02
5.3	0.5		ITNA	77CAH 01	0.89	0.02		ITNA	78NAD 02
5.4	0.8		ITNA	73SHE 01	0.91	0.11		ITNA	77ROW 04
5.5	0.7		ITNA	81WAN 01	0.91	0.15		ITNA	85FIL 01
5.8		34	WXRF	82MIL 01	0.92	0.05		ITNA	73SHE 01
5.8	0.4		IENA	77ROW 03	0.95			ITNA	75KLE 01
5.8	0.4	D	NAA	79STE 01	0.96			ITNA	78WEA 01
5.8	0.4	5	IENA	76STE 05	0.96	0.05		ITNA	75OND 01
5.8	0.5		ITNA	85FIL 01	0.96	0.06		ITNA	79GRE 01
6.1	0.3		EXRF	79GIA 01					
6.1	0.6	5	IENA	76STE 05					
6.2	0.3		OES	76WEW 01					
7.7	1.4		ITNA	82SUZ 02					
8	1		XRF	79PRA 01					
8.5			XRF	75KLE 01					
9	2		NAA	76HAN 01					

TABLE 1632-2: INDIVIDUAL DATA FOR NBS SRM 1632 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Hf (ug/g) cont.</u>					<u>I (ug/g)</u>				
0.97	0.09		ITNA	79FRU 01	2.68	0.2		RTNA	77ROO 01
0.97	0.1		ITNA	73ABE 01	2.78	0.38		ITNA	73SHE 01
1.00	0.07		ITNA	76RAG 01	2.8			ITNA	78WEA 01
1.02	0.03		ITNA	77MAE 01	2.8	0.4		ITNA	75RUC 01
1.1			ITNA	75MIL 01	2.9	0.3	D	NAA	79STE 01
1.1	0.07		NAA	76HAN 01	2.9	0.3		ITNA	76STE 05
1.1	0.15		ITNA	75RUC 01	3		34	WXRF	82MIL 01
1.1	0.2		ITNA	77CAH 01	3.3	0.3		PAA	77WIL 01
1.1	0.4		ITNA	81WAN 01	3.3	0.3		PAA	78HIS 01
1.15	0.12		ITNA	76WEW 01	3.3	0.4		ITNA	77CAH 01
1.4	0.09	9	ITNA	82SUZ 02	3.3	0.5		ITNA	77MAE 01
1.53	0.5	9	ITNA	82SUZ 02	3.7	0.5		IENA	84GLA 02
					4	1		ITNA	79GRE 01
					6.2	1.9		ITNA	81WAN 01
					6.63	1.2		ITNA	75NAD 02
<u>Hg (ng/g)</u>					<u>In (ng/g)</u>				
70	5		CVAA	84BAR 02					
88	5		CVAA	75KLE 01					
100			PAA	74CHA 01					
100			PAA	76CHA 01	16.9	1.2		IENA	77ROW 03
100			PAA	77JER 01	16.9	1.7	5	IENA	76STE 05
110			ITNA	78WEA 01	17	1	D	NAA	79STE 01
110	10		RTNA	84DEL 01	17.8	1	5	IENA	76STE 05
110	10		RTNA	74ORV 01	30	20		ITNA	76RAG 01
110	10		RTNA	75RUC 01	40	10		ITNA	73SHE 01
110	16		RTNA	77JER 01	56	9		ITNA	82SUZ 02
110	50		ITNA	77JER 01	70			ITNA	75KLE 01
111	10		FAA	77GLA 03	180	20		ITNA	77CAH 01
117	13		FAA	75KOI 01	200	120		ITNA	75OND 01
120			CVAA	82NAD 01	220	20		ITNA	75RUC 01
120			CVAA	81NAD 01	230	20		PAA	74CHA 01
120	20		ITNA	79FRU 01	230	30		PAA	76CHA 01
122	29		CVAA	80DUM 01					
126	6		CVAA	74RAI 01	<u>Ir (ng/g)</u>				
136	9		FAA	82UCH 02					
160	40		ITNA	82SUZ 02	2.48	0.27		ITNA	73SHE 01
160	80		ITNA	76WEW 01	2.5			ITNA	78WEA 01
180			ITNA	77GLU 01	3.53	0.52		RTNA	77NAD 02
230	20		ITNA	78NAD 02					
230	20		ITNA	75NAD 02	<u>K (ug/g)</u>				
230	50		ITNA	76BLO 01					
510	170		ITNA	75RIC 01	2410	70		XRF	79PRA 01
950	90		ITNA	73SHE 01	2500			ICPES	80NAD 01
					2500	200	11	ICPES	85HAR 01
					2500	200		ICPES	84NAD 01
					2570		4	AA	79REI 01
					2600		11	ICPES	85HAR 01
240	30		IENA	77ROW 03	2600	200		ITNA	76KUC 01
240	30		IENA	76STE 05	2650	190		ITNA	76BLO 01
240	30	D	NAA	79STE 01	2660	20		ITNA	75RIC 01
250			FAA	82GUP 02	2700			ICPES	80NAD 01
260	30		ITNA	84ODD 01	2700			ICPES	80NAD 01
270	40		RTNA	84ODD 01					
<u>Ho (ng/g)</u>									
240	30		IENA	77ROW 03					
240	30		IENA	76STE 05					
240	30	D	NAA	79STE 01					
250			FAA	82GUP 02					
260	30		ITNA	84ODD 01					
270	40		RTNA	84ODD 01					

TABLE 1632-2: INDIVIDUAL DATA FOR NBS SRM 1632 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>K (ug/g) cont.</u>					<u>La (ug/g) cont.</u>				
2700	100		PAA	76CHA 01	10.5			ITNA	75KLE 01
2700	200		ITNA	79FRU 01	10.5	0.2		ITNA	79FRU 01
2700	200		ITNA	76RAG 01	10.5	0.5		ITNA	73ABE 01
2700	300		NAA	76HAN 01	10.5	0.9		ITNA	81WAN 01
2750	100	D	TCGS	80AND 01	10.6	0.4		ITNA	77CAH 01
2750	100		TCGS	79FAI 01	10.7			ITNA	78WEA 01
2780	230		ITNA	75NAD 02	10.7	0.3		ITNA	77MAE 01
2800			ITNA	78WEA 01	10.7	0.4		ITNA	82SUZ 02
2800	100		ITNA	73ABE 01	10.7	1.2		ITNA	75OND 01
2800	200		ITNA	77MAE 01	10.8	0.3		RTNA	84ODD 01
2800	200		ITNA	79GRE 01	10.8	0.8		ITNA	77ROW 04
2800	200		ITNA	78NAD 02	11			OES	82GUP 02
2800	200		ITNA	78LAU 02	11	1		ITNA	85FIL 01
2800	300		ITNA	75OND 01	11.2	0.3		ITNA	83NDI 01
2800	300		ITNA	77CAH 01	11.3			ITNA	75MIL 01
2800	500		ITNA	76WEW 01	11.3	0.4		ITNA	75RUC 01
2840	80		GAMMA	73ABE 01	11.3	3.3		ITNA	73SHE 01
2900			ITNA	75MIL 01	11.4	0.3	11	ICPES	85HAR 01
2900			ITNA	75KLE 01	11.4	0.4		ITNA	84ODD 01
2900			ICPES	80NAD 01	11.4	0.5		ITNA	77ROW 03
2900	200		ITNA	75RUC 01	11.4	0.5		ITNA	76STE 05
2930	120		ITNA	83NDI 01	11.5	0.7		ITNA	79GRE 01
2980	200		ITNA	76STE 05	12.7		11	ICPES	85HAR 01
2980	240		ITNA	77ROW 03					
3000	75		ICPES	81CHU 01	<u>Li (ug/g)</u>				
3000	200	D	NAA	79STE 01	24	1.1		OES	76WEW 01
3000	200		ITNA	78MAC 01	25			AA	76WEW 01
3040	230		ITNA	85FIL 01	28.7	0.6		ICPES	81CHU 01
3100	500		ITNA	81WAN 01					
3100	600		OES	76WEW 01	<u>Lu (ng/g)</u>				
3300			ITNA	77GLU 01	100			ITNA	75MIL 01
3500	360		ITNA	73SHE 01	100			FAA	82GUP 02
4000	200		ITNA	82SUZ 02	109	11	D	ITNA	77ROW 04
<u>La (ug/g)</u>					109	11	D	NAA	79STE 01
6	0.17		OES	76WEW 01	109	11		ITNA	77ROW 03
7.89	0.15		ITNA	75NAD 02	120	5		ITNA	75NAD 02
7.9	0.2		ITNA	78NAD 02	120	10		ITNA	78NAD 02
8.3	0.2		ITNA	78MAC 01	130	5		ITNA	77MAE 01
9.1	0.4		ITNA	76BLO 01	130	20		ITNA	84ODD 01
9.3	0.3		ICPES	81CHU 01	130	30		ITNA	77CAH 01
9.3	0.5		ITNA	78LAU 02	140	10		ITNA	75OND 01
9.5	0.2		ITNA	76RAG 01	140	20		ITNA	78LAU 02
9.76	0.45		NAA	76HAN 01	140	20		NAA	76HAN 01
10		34	WXRf	82MIL 01	140	30		RTNA	84ODD 01
10			FAA	82GUP 02	140	70		ITNA	81WAN 01
10.3	0.5		ITNA	77ROW 03	150	10		ITNA	75RUC 01
10.3	0.5	D	ITNA	77ROW 04	150	20		ITNA	76WEW 01
10.3	0.5	D	NAA	79STE 01	210	20		ITNA	82SUZ 02
10.3	1.1		ITNA	76STE 05	416	17		ITNA	73SHE 01

TABLE 1632-2: INDIVIDUAL DATA FOR NBS SRM 1632 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Mg (ug/g)</u>					<u>Mn (ug/g) cont.</u>				
980	250		ITNA	73SHE 01	40	4		ITNA	76WEW 01
1000	100		ICPES	84NAD 01	40	7		ITNA	78NAD 02
1100			ITNA	77GLU 01	40.3	6.9		ITNA	75NAD 02
1100	300		ITNA	77MAE 01	41			ITNA	78WEA 01
1150	40	11	ICPES	85HAR 01	41	1		ITNA	75RIC 01
1190		11	ICPES	85HAR 01	41	2		NAA	76HAN 01
1200			ICPES	80NAD 01	41	4	D	NAA	79STE 01
1200			ICPES	80NAD 01	41	6		ITNA	80BUA 01
1340	270		ITNA	82SUZ 02	41	6		ITNA	73ABE 01
1370	40		ICPES	81CHU 01	41.1	3.6		ITNA	76STE 05
1400			ICPES	80NAD 01	41.1	3.6		ITNA	77ROW 03
1500	300		ITNA	75NAD 02	41.2		11	ICPES	85HAR 01
1500	300		ITNA	78NAD 02	41.7	0.5		AA	79ROS 03
1600			ICPES	80NAD 01	42			ICPES	80NAD 01
1600	150		PAA	74CHA 01	42	1		ITNA	79GRE 01
1600	200		PAA	76CHA 01	42	6		ITNA	79FRU 01
1600	300		OES	76WEW 01	42.5	5.8		ITNA	81WAN 01
1700	200		ITNA	79GRE 01	42.8	1.9		ITNA	83NDI 01
1700	300		ITNA	76STE 05	42.8	2.4		ITNA	77CAH 01
1700	300	D	NAA	79STE 01	43	1		ITNA	78MAC 01
1700	300		ITNA	77ROW 03	43	3		PAA	76CHA 01
1900	400		NAA	76HAN 01	43	4	D	NAA	74OND 01
2000	400		ITNA	76WEW 01	43	4		ITNA	75OND 01
2000	500		ITNA	75OND 01	43	6		ITNA	76BLO 01
2300	400		ITNA	81WAN 01	43.5	2.4		TCGS	79FAI 01
2300	700		ITNA	73ABE 01	43.5	2.4	D	TCGS	80AND 01
2480			ITNA	75KLE 01	43.7	1.8		ITNA	75RUC 01
2500	800		ITNA	76RAG 01	44	0.9	11	AA	82LIN 03
4000	2000		ITNA	78LAU 02	44	2		ITNA	78LAU 02
8200	2000		ITNA	78MAC 01	44.5	0.9		ITNA	77MAE 01
					44.6	0.4	11	AA	82LIN 03
					45			ICPES	80NAD 01
					45	1.4		ICPES	81CHU 01
					45	3		ITNA	76KUC 01
					46			ITNA	75MIL 01
					46	3		ITNA	75KLE 01
					47.1	4.1		PAA	74CHA 01
					<u>Mo (ug/g)</u>				
27.5	2.4		ITNA	82SUZ 02	0.2	0.02		PAA	74CHA 01
36	1.8		OES	76WEW 01	0.2	0.04		PAA	76CHA 01
36.8			FAA	78GUI 01	0.3	0.1		PAA	80SEG 01
37			EXRF	82KEE 01	0.3	0.1	6	PAA	82SEG 01
37	2		EXRF	81KIN 01	0.3	0.1	6	PAA	82SEG 01
37	4		XRF	79PRA 01	0.41	0.1		ITNA	82SUZ 02
38		4	AA	79REI 01	3.08	0.12		IENA	77ROW 03
38	2.6		ITNA	73SHE 01	3.08	0.12	D	IENA	77ROW 04
38	8	35	ITNA	81GLA 03	3.1	0.1	D	NAA	79STE 01
38.3	0.8	11	ICPES	85HAR 01	3.14	0.28		RTNA	78NAD 01
38.5			AA	78GUI 01	3.2	0.4		ITNA	77CAH 01
39		34	WXRF	82MIL 01					
39			ITNA	84CLE 01					
39			ITNA	77GLU 01					
39	2		ICPES	84NAD 01					
39	3		EXRF	79GIA 01					
39.5	0.7		ITNA	76RAG 01					
40			AA	76WEW 01					

TABLE 1632-2: INDIVIDUAL DATA FOR NBS SRM 1632 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Mo (ug/g) cont.</u>					<u>Na (ug/g) cont.</u>				
3.3			ICPES	80NAD 01	406	7		ITNA	83NDI 01
3.4			ITNA	75KLE 01	409			ICPES	80NAD 01
3.6	0.16		OES	76WEW 01	410			ITNA	75MIL 01
4		34	WXRF	82MIL 01	414			ITNA	78WEA 01
4.7			ICPES	80NAD 01	414	20		ITNA	75OND 01
5			ITNA	78WEA 01	415	42		ITNA	76WEW 01
5			ITNA	77GLU 01	420	20		ITNA	79FRU 01
					420	30		ITNA	73ABE 01
					439	42		ICPES	84NAD 01
					480		4	AA	79REI 01
					840	30		ITNA	82SUZ 02
					1200	240		OES	76WEW 01
<u>N (%)</u>					<u>Nb (ug/g)</u>				
1.01			IC	83NAD 01		<	15	OES	76WEW 01
1.2	0.2	35	TCGS	79GLA 04	5			34	WXRF
1.3	0.02		CB	80SCH 02					
1.3	0.2	D	TCGS	80AND 01					
1.3	0.2		TCGS	79FAI 01					
1.98			CB	79PRA 01					
<u>Na (ug/g)</u>					<u>Nd (ug/g)</u>				
325	6		ITNA	75RIC 01					
330		11	ICPES	85HAR 01	6.4	1.5		ITNA	73SHE 01
330	20	11	ICPES	85HAR 01	7		34	WXRF	82MIL 01
335			ICPES	80NAD 01	8			AA	82GUP 02
340	10		ITNA	78LAU 02	8.7	1	D	NAA	79STE 01
347	32		ITNA	75NAD 02	8.7	1	D	ITNA	77ROW 04
350	20		PAA	76CHA 01	8.7	1		ITNA	77ROW 03
350	30		ITNA	78NAD 02	9.5	1.9		ICPES	81CHU 01
351	30		PAA	74CHA 01	9.7	0.4		ITNA	84ODD 01
352	34		ITNA	77CAH 01	9.9	0.6		RTNA	84ODD 01
353	21		ITNA	76KUC 01	10.7			ITNA	75MIL 01
360	10		ITNA	79GRE 01	11.3	2		TCGS	79FAI 01
360	20		NAA	76HAN 01	11.3	2	D	TCGS	80AND 01
368	9		ITNA	77MAE 01	16.9	1.4	12	ITNA	82SUZ 02
370			ICPES	80NAD 01	17.8	3.7	12	ITNA	82SUZ 02
370	33		ITNA	73SHE 01					
380			ICPES	80NAD 01					
380	3		ITNA	78MAC 01					
380	12		ITNA	76RAG 01				EXRF	82KEE 01
380	25		ITNA	76STE 05				IENA	77ROW 03
380	25		ITNA	77ROW 03			11	ICPES	85HAR 01
380	25	D	NAA	79STE 01		0.7		ITNA	78NAD 02
383	14		ITNA	75RUC 01		0.7		ITNA	75NAD 02
387	42		ITNA	81WAN 01		0.1	11	AA	82LIN 03
390			ITNA	75KLE 01		3	9	ITNA	78LAU 02
390			ITNA	77GLU 01		1.2		PAA	74CHA 01
390		34	WXRF	82MIL 01		0.4	11	ICPES	85HAR 01
395			ITNA	86GAU 01			4	AA	79REI 01
400			ITNA	84CLE 01		1		PAA	80SEG 01
400	7		ICPES	81CHU 01		1	6	PAA	82SEG 01
400	30		ITNA	76BLO 01		2	6	PAA	82SEG 01
400	900	R	ITNA	81GLA 03		2		XRF	79FRU 01

TABLE 1632-2: INDIVIDUAL DATA FOR NBS SRM 1632 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ni (ug/g) cont.</u>					<u>P (ug/g)</u>				
14	2		PAA	76CHA 01	71			AA	76WEW 01
14.3			AA	78GUI 01	92			ICPES	80NAD 01
14.5			XRF	75KLE 01	104			ICPES	80NAD 01
14.5	0.6	11	AA	82LIN 03	117	4	11	ICPES	85HAR 01
14.5	1.2		EXRF	79GIA 01	120			VV	77GLU 01
14.7	0.6	6	IDMS	74MOO 01	121		11	ICPES	85HAR 01
14.7	0.6	6	IDMS	74MOO 01	137	14		ICPES	84NAD 01
14.8			POL	74MAI 01	138		34	WXRf	82MIL 01
14.8	0.7	6	IDMS	74MOO 01	150	9		ICPES	81CHU 01
15			AA	76WEW 01	156			ICPES	81NAD 01
15		34	WXRf	82MIL 01	250			COLOR	80NAD 01
15	1.1		OES	76WEW 01	270			COLOR	80NAD 01
15	3		SSMS	77DON 01	1200	100		XRF	79PRA 01
15.2	0.5		ICPES	81CHU 01	<u>Pb (ug/g)</u>				
15.5	1.1	8	SSMS	80KOP 01	12	120	R	OES	76WEW 01
16		D	NAA	79STE 01	13.6	6.5		EXRF	79GIA 01
16			ICPES	80NAD 01	15			ICPES	80NAD 01
16	2		ICPES	84NAD 01	19.1			ICPES	81NAD 01
16	2		ITNA	79FRU 01	20			ICPES	80NAD 01
16	4		ITNA	73ABE 01	20	2		XRF	79PRA 01
16	5		ITNA	77CAH 01	23			VV	77GLU 01
16.4			IENA	77ROW 04	23	0.9		EXRF	73SPA 01
17.1			FAA	78GUI 01	24		4	AA	79REI 01
17.5	1		EXRF	81KIN 01	24	4	11	ICPES	85HAR 01
18	4		ITNA	75OND 01	25.5	4.2	11	AA	82LIN 03
18	4	D	NAA	74OND 01	26	6		FAA	76BLO 01
18	5		NAA	76HAN 01	26.1			AA	78GUI 01
18.4	2.1		ITNA	75RUC 01	27.9	2.5	8	SSMS	80KOP 01
18.9	0.8	12	ITNA	82SUZ 02	28	1	6	PAA	82SEG 01
19			ICPES	80NAD 01	28	2		PAA	80SEG 01
20			ITNA	77GLU 01	28	2	6	PAA	82SEG 01
20	11		ITNA	85FIL 01	28	3.6		SSMS	77PAU 01
20.4	1	12	ITNA	82SUZ 02	28	4		IDMS	78CAR 02
83	7		XRF	79PRA 01	28	5		FAA	75BLO 02
<u>O (%)</u>					28.4			POL	74MAI 01
10.08			CALC	79PRA 01	28.5	1.5		ICPES	81CHU 01
15.05	0.11	34	14NAA	80KHA 02	28.6			FAA	78GUI 01
<u>Os (ug/g)</u>					29	0.5		AA	73TAL 01
<	1		RTNA	77NAD 02	29	2		PAA	77JER 01
					29.4			IDMS	75KLE 01
					30			AA	76WEW 01
					30.8			FAA	75POL 01
					31	3		EXRF	81KIN 01
					32		34	WXRf	82MIL 01
					32	2		PAA	76CHA 01
					32	2		PAA	77JER 01
					32.1	1.8		PAA	74CHA 01
					33	2		AA	79ROS 03
					33	3		SSMS	77DON 01
					33.8	0.1	11	AA	82LIN 03
					36		11	ICPES	85HAR 01

TABLE 1632-2: INDIVIDUAL DATA FOR NBS SRM 1632 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Pd (ng/g)</u>					<u>Rb (ug/g) cont.</u>				
<	5		RTNA	77NAD 02	24			XRF	75KLE 01
					24			ITNA	75MIL 01
<u>Pr (ug/g)</u>					24.7	1		ITNA	79ROS 03
<	2	L	FAA	82GUP 02	26	1	12	ITNA	82SUZ 02
<	15	L	OES	76WEW 01	28.6	3.2		EXRF	73SPA 01
2		34	WXRF	82MIL 01	30	1	12	ITNA	82SUZ 02
3.6	0.4	12	ITNA	82SUZ 02	<u>Rh (ug/g)</u>				
4.6	0.5	12	ITNA	82SUZ 02	<	5	L	OES	76WEW 01
4.9	0.5		RTNA	84ODD 01	<u>Ru (ng/g)</u>				
<u>Pt (ng/g)</u>					<	5000	L	OES	76WEW 01
<	15000	L	OES	76WEW 01	18	1		RTNA	77NAD 02
186	2.3		RTNA	77NAD 01	<u>S (%)</u>				
270	20		RTNA	77NAD 02	0.17			ICPES	80NAD 01
<u>Rb (ug/g)</u>					0.17			CB	80NAD 01
10	3		ITNA	81WAN 01	0.9			CB	80NAD 01
11	1		XRF	79PRA 01	0.9			ICPES	80NAD 01
15		35	ITNA	81GLA 03	1.22			IC	83NAD 01
16.3	3.7		ITNA	75NAD 02	1.25			XRF	77GLU 01
16.3	3.7		ITNA	78NAD 02	1.29	0.03	D	TCGS	80AND 01
18		34	WXRF	82MIL 01	1.29	0.03		TCGS	79FAI 01
18	1		XRF	79FRU 01	1.3	0.02		IC	85GEN 01
18.3	1.1	D	IENA	77ROW 04	1.32			XRF	82NAD 01
18.3	1.6		IENA	77ROW 03	1.32			XRF	81NAD 01
18.3	1.6	D	NAA	79STE 01	1.32	0.01		CB	86GAU 01
19	1.5		ITNA	76RAG 01	1.32	0.03		CB	85GLA 03
19	1.9		ITNA	73SHE 01	1.32	0.07		TCGS	77JUR 01
19	2		ITNA	79FRU 01	1.34	0.08		CB	84GLA 11
19	2		ITNA	73ABE 01	1.52	0.05		XRF	79PRA 01
19	6		ITNA	76WEW 01	1.99			CB	77LAD 01
19.4	2.3		ITNA	77ROW 04	2.02			TITR	77LAD 01
19.5			ITNA	75KLE 01	<u>Sb (ug/g)</u>				
20	2		PAA	76CHA 01	0.61	0.05		ITNA	82SUZ 02
20	2		PAA	75OND 01	1.8	0.9		FAA	77ARU 01
20	2		ITNA	79GRE 01	2.2			ITNA	75MIL 01
20	2	9	ITNA	78LAU 02	2.3	5.8	R*	COLOR	77ARU 01
20	4		ITNA	78LAU 02	2.6	2		ITNA	77ARU 01
20.1	0.6		EXRF	79GIA 01	2.6	3.6		ITNA	85FIL 01
21			ITNA	78WEA 01	2.7		5	ITNA	77ROW 04
21	2		ITNA	75OND 01	2.8		5	IENA	77ROW 04
22	2.9		OES	76WEW 01	2.8	0.7		ITNA	81WAN 01
22.5	0.7		ITNA	77MAE 01	3.0		34	WXRF	82MIL 01
22.5	3.7		ITNA	75RUC 01	3.0		5	ITNA	77ROW 04
22.8	4.8		ITNA	77CAH 01	3.0			IENA	77ROW 03
23	3		NAA	76HAN 01					
23	4		ITNA	85FIL 01					
23	7		ITNA	76KUC 01					

TABLE 1632-2: INDIVIDUAL DATA FOR NBS SRM 1632 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Sb (ug/g) cont.</u>					<u>Sc (ug/g) cont.</u>				
3.0			RTNA	75RUC 01	3.8	0.1	11	ICPES	85HAR 01
3.0		D	NAA	79STE 01	3.8	0.4		ITNA	76WEW 01
3.0			ITNA	77GLU 01	3.81	0.47		ITNA	75RUC 01
3.06	1.4		ITNA	75NAD 02	3.88	0.15		NAA	76HAN 01
3.09	0.26		PAA	74CHA 01	3.9	0.2		ITNA	76KUC 01
3.1	1.4		ITNA	78NAD 02	3.95	0.06		IENA	77ROW 04
3.2		5	IENA	77ROW 04	3.98	0.04		ITNA	78MAC 01
3.2		35	ITNA	81GLA 03	4	0.2		ITNA	79GRE 01
3.4	0.1		ITNA	76RAG 01	4.1		34	WXRF	82MIL 01
3.4	0.8		ITNA	75RUC 01	4.1			ITNA	75MIL 01
3.6	0.8		ITNA	77CAH 01	4.1	0.2		ITNA	81WAN 01
3.6	1.2		ITNA	77MAE 01	4.1	0.4		ITNA	85FIL 01
3.62			FAA	75POL 01	4.2	0.1		ITNA	77MAE 01
3.7	0.3		ITNA	79FRU 01	4.5			ITNA	75KLE 01
3.7	2		ITNA	73ABE 01	5.4	0.1		ITNA	82SUZ 02
3.8			ITNA	84CLE 01	<u>Se (ug/g)</u>				
3.8	0.2		ITNA	78MAC 01	1.1	0.08		CPXRF	80KIR 01
3.8	0.4		NAA	76HAN 01	2			HAA	74BYR 02
3.82	0.1		ITNA	78LAU 02	2.3	0.2	9	ITNA	82SUZ 02
3.9			ITNA	78WEA 01	2.4	0.1		ITNA	78NAD 02
3.9	0.24		ITNA	77JER 01	2.44	0.08		ITNA	75NAD 02
3.9	0.3		PAA	76CHA 01	2.5	0.2		ITNA	80WAN 01
3.9	0.3		PAA	77JER 01	2.51	0.13	8	SSMS	80KOP 01
3.9	1.3		ITNA	75OND 01	2.6	0.1	9	ITNA	82SUZ 02
4.1	1.2		ITNA	76WEW 01	2.6	0.16		FAA	77ARU 01
4.3	0.3		ITNA	79GRE 01	2.6	0.3	9	ITNA	80WAN 01
4.4	0.3		FAA	78HAY 01	2.7	0.2		RTNA	74ORV 01
4.45			ITNA	75KLE 01	2.8			ITNA	77GLU 01
6.4	1.6		ITNA	73SHE 01	2.8	0.11		RTNA	75RUC 01
<u>Sc (ug/g)</u>					2.86	0.13		DCPES	81CAR 02
3.4	0.3		ITNA	77CAH 01	2.86	0.13		GCMES	75KLE 01
3.4	0.3		ITNA	73ABE 01	2.86	0.13		GCMES	74TAL 02
3.47			ITNA	84GLA 11	2.9	0.1		ICPES	80HAA 01
3.5	0.08		ITNA	75NAD 02	2.9	0.2		ITNA	79GRE 01
3.5	0.1		ITNA	78NAD 02	2.9	0.2		XRF	77ARU 01
3.58	0.35		PAA	74CHA 01	2.9	0.4		ITNA	76RAG 01
3.6	0.08		OES	76WEW 01	2.99	0.07		SSMS	77PAU 01
3.6	0.3		ITNA	83NDI 01	3		34	WXRF	82MIL 01
3.6	0.3		PAA	76CHA 01	3.0	0.3		PAA	76CHA 01
3.68	0.08		ITNA	76RAG 01	3.0	0.3	H	OES	80CLA 01
3.69	0.05		ITNA	78LAU 02	3.0	0.3	D	NAA	79STE 01
3.7			ITNA	78WEA 01	3.0	0.3	D	IENA	77ROW 04
3.7	0.1		ITNA	75RIC 01	3.0	0.3		IENA	77ROW 03
3.7	0.3		ITNA	75OND 01	3.0	0.4		RTNA	80KNA 01
3.75	0.24		ITNA	79ROS 03	3.0	0.4	6	PAA	82SEG 01
3.8		11	ICPES	85HAR 01	3	1	6	PAA	82SEG 01
3.8	0.05	D	NAA	79STE 01	3	1		PAA	80SEG 01
3.8	0.05		ITNA	77ROW 03	3.03	0.28		PAA	74CHA 01
3.8	0.05	D	ITNA	77ROW 04	3.05			ITNA	75KLE 01

TABLE 1632-2: INDIVIDUAL DATA FOR NBS SRM 1632 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Se (ug/g) cont.</u>					<u>Sm (ug/g)</u>				
3.05	0.48		ASV	76AND 01	1.3	0.19		ITNA	73SHE 01
3.1			ITNA	78WEA 01	1.3	0.2		ICPES	81CHU 01
3.1	0.2		EXRF	79GIA 01	1.38	0.09		ITNA	77ROW 04
3.1	0.3		ITNA	85FIL 01	1.38	0.1		IENA	76STE 05
3.1	0.4		XRF	79FRU 01	1.4			FAA	82GUP 02
3.1	0.6		ITNA	78MAC 01	1.4	0.1		IENA	77ROW 03
3.1	1.6		ITNA	76WEW 01	1.4	0.1		ITNA	78MAC 01
3.2	0.3		ITNA	75RIC 01	1.41	0.06	D	NAA	79STE 01
3.2	0.4		ITNA	76BLO 01	1.41	0.06		IENA	77ROW 04
3.3	0.2	9	ITNA	78LAU 02	1.53	0.02		TCGS	79FAI 01
3.3	0.3		ITNA	79FRU 01	1.53	0.02	D	TCGS	80AND 01
3.3	0.4		ITNA	73ABE 01	1.55	0.07		NAA	76HAN 01
3.3	0.6		ITNA	78LAU 02	1.6			ITNA	75MIL 01
3.4	0.2		ITNA	75OND 01	1.6	0.2		ITNA	77CAH 01
3.4	0.2	D	NAA	74OND 01	1.66	0.16		ITNA	75NAD 02
3.5	0.3		ITNA	77MAE 01	1.7			ITNA	78WEA 01
3.6	0.4		ITNA	75RUC 01	1.7	0.2		ITNA	78NAD 02
3.7			ITNA	84CLE 01	1.7	0.2		ITNA	75OND 01
3.7	0.7		ITNA	77ROW 04	1.7	0.3		ITNA	73ABE 01
3.8	0.51		ITNA	73SHE 01	1.7	0.3		ITNA	84ODD 01
3.8	0.7		ITNA	77CAH 01	1.72	0.08		ITNA	76RAG 01
3.9	0.4		ITNA	81WAN 01	1.74	0.02		ITNA	78LAU 02
4.7			COLOR	74BYR 02	1.8	0.07		ITNA	85FIL 01
5.5	0.5		EXRF	73SPA 01	1.8	0.1		RTNA	84ODD 01
6	1		XRF	79PRA 01	1.8	0.1		ITNA	75RUC 01
					1.83	0.08		ITNA	83NDI 01
					1.9	0.2		ITNA	79GRE 01
					1.93	0.14		ITNA	77MAE 01
					2.9	0.2		ITNA	82SUZ 02
<u>Si (%)</u>					<u>Sn (ug/g)</u>				
2.1	0.42		OES	76WEW 01	2	10	R	OES	76WEW 01
2.6		4	AA	79REI 01	4	0.2		ICPES	80HAA 01
2.68	0.2		ICPES	84NAD 01	5		34	WXRF	82MIL 01
2.95	0.06		TCGS	79FAI 01	8			ICPES	80NAD 01
2.95	0.06	D	TCGS	80AND 01	9.7			ICPES	80NAD 01
3.0	0.4		PAA	76CHA 01	10			ITNA	77GLU 01
3.12	0.37		ITNA	83NDI 01	10	1		PAA	76CHA 01
3.14			ICPES	80NAD 01	10	1		PAA	80SEG 01
3.17			ICPES	80NAD 01	10	1	6	PAA	82SEG 01
3.19			ICPES	80NAD 01	10.2	1		PAA	74CHA 01
3.19	0.1		XRF	79PRA 01	11	0.4	6	PAA	82SEG 01
3.2			AA	76WEW 01	125	20		ITNA	73SHE 01
3.21			ICPES	80NAD 01					
3.5	0.8		14NAA	76BLO 01					
3.92			VV	77GLU 01					

TABLE 1632-2: INDIVIDUAL DATA FOR NBS SRM 1632 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Sr (ug/g)</u>					<u>Ta (ng/g)</u>				
1.02	0.05		ITNA	75NAD 02	170			ITNA	75KLE 01
1.33	0.1		PAA	74CHA 01	210		35	ITNA	81GLA 03
91	9	12	ITNA	82SUZ 02	210	20		ITNA	77CAH 01
93	7	12	ITNA	82SUZ 02	210	20		ITNA	75RUC 01
93	9.2		ITNA	73SHE 01	230	20		ITNA	76RAG 01
99		4	AA	79REI 01	240			ITNA	78WEA 01
112	26		ITNA	76RAG 01	240	10		ITNA	75NAD 02
120	20		NAA	76HAN 01	240	10		ITNA	78NAD 02
123			ITNA	75KLE 01	240	25		ITNA	85FIL 01
125	26		ITNA	78NAD 02	240	40		ITNA	75OND 01
128	3		XRF	79PRA 01	250	10		ITNA	77MAE 01
129			ITNA	75MIL 01	250	30		NAA	76HAN 01
131	23		ITNA	76STE 05	270	20		ITNA	79ROS 03
136	2	11	ICPES	85HAR 01	273	6		IENA	77ROW 03
140	2.8		ICPES	81CHU 01	273	6	D	NAA	79STE 01
140	15		PAA	76CHA 01	273	9	D	IENA	77ROW 04
140	40		ITNA	78LAU 02	290	50		ITNA	78LAU 02
142		11	ICPES	85HAR 01	300			ITNA	77ROW 04
144			XRF	75KLE 01	300			ITNA	75MIL 01
145	9		ITNA	75RUC 01	350	20		ITNA	82SUZ 02
150	20		XRF	79FRU 01	360	28		ITNA	73SHE 01
151		34	WXRF	82MIL 01	460	50		ITNA	73ABE 01
151	4		EXRF	79GIA 01	<u>Tb (ng/g)</u>				
155	6		ITNA	77CAH 01	30			ITNA	73SHE 01
155	15		EXRF	73SPA 01	200	20		ITNA	76RAG 01
159	14		IENA	77ROW 04	200	40		ITNA	76WEW 01
160	10		IENA	77ROW 03	230	10		ITNA	78LAU 02
161	9	D	NAA	79STE 01	230	50		ITNA	75OND 01
161	9	5	IENA	76STE 05	230	60		ITNA	73ABE 01
161	16		ITNA	75OND 01	260	20		ITNA	82SUZ 02
164	14		ITNA	77MAE 01	270	10	D	NAA	79STE 01
164	25		ITNA	81WAN 01	274	12		IENA	77ROW 03
165	21	5	IENA	76STE 05	274	12	D	IENA	77ROW 04
170	10		ITNA	73ABE 01	290	80		ITNA	85FIL 01
170	17		ITNA	76WEW 01	310	40		ITNA	84ODD 01
170	20		ITNA	78MAC 01	340	20		RTNA	84ODD 01
170	20	9	ITNA	78LAU 02	400	20		ITNA	78NAD 02
170	20		ITNA	79FRU 01	400	20		ITNA	75NAD 02
171	22		ITNA	85FIL 01	500			ITNA	75MIL 01
190			ITNA	77ROW 04	<u>Te (ng/g)</u>				
280	56		OES	76WEW 01	<	600	L	WXRF	82MIL 01
					<	690	L	ITNA	82SUZ 02
					<	1000	L	PAA	76CHA 01
					500			FAA	77GLU 01
					600	40	35	RTNA	75GLA 01
					1020			PAA	74CHA 01

TABLE 1632-2: INDIVIDUAL DATA FOR NBS SRM 1632 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Th (ug/g)</u>					<u>Ti (ug/g) cont.</u>				
1.28	0.06		ITNA	75NAD 02	890	200		PAA	75OND 01
1.3	0.1		ITNA	78NAD 02	900	100		PAA	76CHA 01
2.4	0.2		ITNA	76BLO 01	900	180		OES	76WEW 01
2.7	0.7		EXRF	79GIA 01	920	50		NAA	76HAN 01
2.87	0.09		ITNA	77ROW 04	930		34	WXRF	82MIL 01
2.87	0.24		ITNA	79ROS 03	930			ICPES	80NAD 01
2.9	0.1		ITNA	76RAG 01	930			ITNA	75KLE 01
2.9	0.2		ITNA	85FIL 01	946	24		ICPES	81CHU 01
3		34	WXRF	82MIL 01	951	53		EXRF	79GIA 01
3			ITNA	75KLE 01	960			ICPES	80NAD 01
3	0.2		ITNA	78LAU 02	960			ICPES	80NAD 01
3.1	0.2		ITNA	75OND 01	972			ICPES	80NAD 01
3.1	0.2		ITNA	73SHE 01	973	50		PAA	74CHA 01
3.12	0.1	D	IENA	77ROW 04	980	60		ITNA	79GRE 01
3.12	0.1		IENA	77ROW 03	995	100		ITNA	78MAC 01
3.12	0.1	D	NAA	79STE 01	1000	260		ITNA	76RAG 01
3.2		35	ITNA	81GLA 03	1028	30		AA	79ROS 03
3.2			ITNA	75MIL 01	1060		35	NAA	81GLA 03
3.2	0.1		ITNA	77MAE 01	1075	100		ITNA	75OND 01
3.2	0.2		ITNA	79GRE 01	1100			ITNA	77GLU 01
3.2	0.3		ITNA	76WEW 01	1100	100		ITNA	81WAN 01
3.2	0.5		NAA	76HAN 01	1100	110		ITNA	76WEW 01
3.3	0.6		ITNA	81WAN 01	1100	200		ITNA	79FRU 01
3.4	0.3		ITNA	79FRU 01	1100	200		ITNA	73ABE 01
3.4	0.6		ITNA	73ABE 01	1160	50		XRF	79PRA 01
3.45	0.1		GAMMA	73ABE 01	1200	200		ITNA	78LAU 02
3.45	0.1		GAMMA	75OND 01	1300	200		XRF	79FRU 01
3.5	0.6		ITNA	77CAH 01	1312	150		ITNA	73SHE 01
3.65	0.49		ITNA	75RUC 01	1550	130		ITNA	82SUZ 02
4.1	0.1	12	ITNA	82SUZ 02	<u>Tl (ng/g)</u>				
4.6	0.1	12	ITNA	82SUZ 02	500	100		PAA	80SEG 01
4.7			DNA	75MIL 01	500	100	6	PAA	82SEG 01
<u>Ti (ug/g)</u>					512	60		PAA	74CHA 01
425	25		ICPES	84NAD 01	520	60		PAA	76CHA 01
680			EXRF	82KEE 01	590	60		SSMS	77PAU 01
690		4	AA	79REI 01	600	100	6	PAA	82SEG 01
790			POL	74MAI 01	600	200		SSMS	77DON 01
800			AA	76WEW 01	610	37	8	SSMS	80KOP 01
800			ITNA	78WEA 01	<u>Tm (ng/g)</u>				
810	20	11	ICPES	85HAR 01	110			FAA	82GUP 02
839	172		ITNA	75NAD 02	300			ITNA	75MIL 01
840	200		ITNA	78NAD 02	300			ITNA	77GLU 01
860		11	ICPES	85HAR 01	300	20		RTNA	84ODD 01
885	150		ITNA	76BLO 01	300	40		ITNA	84ODD 01
890	35	D	TCGS	80AND 01					
890	35		TCGS	79FAI 01					
890	50	D	NAA	79STE 01					
890	50		ITNA	76STE 05					
890	50		ITNA	77ROW 03					

TABLE 1632-2: INDIVIDUAL DATA FOR NBS SRM 1632 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>U (ug/g)</u>					<u>V (ug/g) cont.</u>				
0.98	0.078		ITNA	73SHE 01	32.9	1.7		ITNA	83NDI 01
1.1	0.08	35	RTNA	75GLA 01	33			ICPES	80NAD 01
1.19			DNA	85GAU 04	33	1		ITNA	76BLO 01
1.2	0.05		IDMS	78CAR 02	33	3		ITNA	78NAD 02
1.2	0.1		ITNA	78NAD 02	33	3		ITNA	78MAC 01
1.2	0.1		ITNA	75NAD 02	33	4		ITNA	73ABE 01
1.21			IDMS	75KLE 01	33	6		ITNA	80BUA 01
1.24	0.05		ITNA	76RAG 01	33.6			AA	78GUI 01
1.25	0.06		ITNA	82SUZ 02	33.9		11	ICPES	85HAR 01
1.26			ITNA	75KLE 01	33.9	3		PAA	74CHA 01
1.3	0.1	6	PAA	82SEG 01	34			ITNA	84CLE 01
1.3	0.1		PAA	80SEG 01	34			ICPES	80NAD 01
1.33	0.05		DNA	84GLA 02	34	3		PAA	76CHA 01
1.34	0.5		ITNA	78MAC 01	35			ITNA	78WEA 01
1.35			ITNA	78WEA 01	35	2.9		ITNA	76STE 05
1.37	0.08		ITNA	74WEA 01	35	2.9	D	NAA	79STE 01
1.4			ITNA	81WAN 01	35	2.9		ITNA	77ROW 03
1.4	0.1	6	PAA	82SEG 01	35	4		ITNA	79FRU 01
1.4	0.4		ITNA	85FIL 01	35.2	1.5		AA	79ROS 03
1.41	0.07		GAMMA	73ABE 01	35.8	3.4		ITNA	81WAN 01
1.41	0.07		GAMMA	75OND 01	35.9	0.8	11	AA	82LIN 03
1.41	0.07	D	NAA	74OND 01	36			AA	76WEW 01
1.43			DNA	75MIL 01	36	2		ITNA	79GRE 01
1.45	0.04	D	NAA	79STE 01	36	3		ITNA	75OND 01
1.45	0.04		IENA	77ROW 04	36	3	D	NAA	74OND 01
1.46	0.02		IENA	76STE 05	36	4		ITNA	76WEW 01
1.46	0.02	D	NAA	79STE 01	36	4		ITNA	73SHE 01
1.46	0.04		IENA	77ROW 03	36.2			FAA	78GUI 01
1.46	0.35		ITNA	75RUC 01	37	3		ITNA	75RIC 01
1.49		35	DNA	81GLA 03	37.6	1.4		ITNA	77MAE 01
1.5			ITNA	75MIL 01	37.9	1.7	11	AA	82LIN 03
1.5	0.1	13	PAA	81SEG 01	38	1.2		ICPES	81CHU 01
1.52	0.11		ITNA	76STE 05	38	4		XRF	79FRU 01
1.6	0.2	13	PAA	81SEG 01	40	3		ITNA	75KLE 01
1.6	0.2		NAA	76HAN 01	41	10		ITNA	76RAG 01
1.6	0.2		ITNA	79FRU 01	42	2		ITNA	82SUZ 02
2		34	WXRF	82MIL 01	43		4	AA	79REI 01
6			AA	76WEW 01	50			ITNA	77GLU 01
					50	10		XRF	79PRA 01
<u>V (ug/g)</u>					<u>W (ng/g)</u>				
24	8		EXRF	79GIA 01					
30	6	35	ITNA	81GLA 03	450	90		ITNA	81WAN 01
31	4		ICPES	84NAD 01	630	60		ITNA	77MAE 01
31.5	2.6	11	AA	82LIN 03	650	150		ITNA	76RAG 01
32		34	WXRF	82MIL 01	710	70	D	NAA	79STE 01
32	1.3		OES	76WEW 01	710	70		IENA	77ROW 04
32	4		ITNA	78LAU 02	710	80		ITNA	82SUZ 02
32.5	1.5		NAA	76HAN 01	740	300		ITNA	75RUC 01
32.7	0.6	11	ICPES	85HAR 01					
32.7	3.4		ITNA	75NAD 02					

TABLE 1632-2: INDIVIDUAL DATA FOR NBS SRM 1632 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>W (ng/g) cont.</u>					<u>Zn (ug/g)</u>				
750			ITNA	78WEA 01	21		11	ICPES	85HAR 01
750	100		IENA	77ROW 03	30	10		ITNA	75OND 01
750	170		ITNA	75OND 01	30	10	D	NAA	74OND 01
780	80		ITNA	79GRE 01	32	3		ITNA	75NAD 02
790	170		IENA	76STE 05	32	3		XRF	79FRU 01
870	200		ITNA	77CAH 01	32	3		ITNA	78NAD 02
1900	800		ITNA	73SHE 01	32	8		SSMS	77DON 01
					33	3	9	ITNA	78LAU 02
					34			XRF	75KLE 01
					34		4	AA	79REI 01
					34			ITNA	78WEA 01
6.6		11	ICPES	85HAR 01	34	1		EXRF	81KIN 01
7			AA	82GUP 02	34	9		ITNA	77CAH 01
7	1		XRF	79PRA 01	34	17		ITNA	76WEW 01
7.4		34	WXRF	82MIL 01	34.9	1.6	11	AA	82LIN 03
7.6	0.81		OES	76WEW 01	35	2	12	ITNA	82SUZ 02
7.9	0.6		EXRF	79GIA 01	35	5		ITNA	77JER 01
8			OES	82GUP 02	35.7	9.9		EXRF	79GIA 01
8.3	0.2	11	ICPES	85HAR 01	36			ICPES	80NAD 01
					36	0.6		RTNA	74ORV 01
					36	7	6	PAA	82SEG 01
					36.6	1.4		EXRF	73SPA 01
					36.9	1.1	11	AA	82LIN 03
					37			AA	76WEW 01
					37	3		PAA	76CHA 01
					37	3		PAA	77JER 01
					37	3		XRF	79PRA 01
					37	3		ITNA	79FRU 01
					37	6		IENA	77ROW 04
					37	10		NAA	76HAN 01
					37.2	17.4		ITNA	75RUC 01
					37.5	2.8		PAA	74CHA 01
					38		34	WXRF	82MIL 01
					38	5		SSMS	77PAU 01
					38.1	0.8		AF	75EPS 01
					38.1	1.4		RTNA	77JER 01
					38.4	0.9		AA	74RAI 01
					38.4	1		AA	75EPS 01
					38.5			AA	78GUI 01
					39			ICPES	80NAD 01
					39			EXRF	82KEE 01
					39	1		FAA	74TAL 01
					39	1	7	AA	73TAL 01
					39	2	11	ICPES	85HAR 01
					39	2	12	ITNA	82SUZ 02
					39	3	6	PAA	82SEG 01
					39	3		PAA	80SEG 01
					39	6		ITNA	77ROW 03
					39	6	D	NAA	79STE 01
					39	6	D	ITNA	77ROW 04
					40	1.2		ICPES	81CHU 01

TABLE 1632-2: INDIVIDUAL DATA FOR NBS SRM 1632 (cont.)

Conc	Uncer	Com	Method	Reference	
<u>Zn (ug/g) cont.</u>					
40	2		ICPES	84NAD	01
40.8	4		ITNA	81WAN	01
42			ITNA	77GLU	01
43	2		ITNA	76RAG	01
45	17		OES	76WEW	01
50	10		ITNA	78LAU	02
52	4		ITNA	78MAC	01
58	7		ITNA	77MAE	01
<u>Zr (ug/g)</u>					
1.56	0.14		PAA	74CHA	01
16	2		PAA	76CHA	01
25	0.75		ICPES	81CHU	01
25	3		OES	76WEW	01
28	24		ITNA	76RAG	01
33	4		EXRF	79GIA	01
38		34	WXRF	82MIL	01
40	4	9	ITNA	78LAU	02
41			ITNA	75MIL	01
45			ITNA	75KLE	01
46			AA	76WEW	01
85	9	12	ITNA	82SUZ	02
90	10	12	ITNA	82SUZ	02

TABLE 1632A-1: COMPILED DATA FOR NBS SRM 1632A TRACE ELEMENTS IN COAL (cont.)

ELEMENT	UNITS	NBS Mean \pm SD	CONSENSUS		MEDIAN	RANGE	AA		MMA		ICPES		XRF		OTHER METHODS	
			Mean \pm SD	(n)			Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n) Method
Mo	ug/g	---	3.85	(2)	---	2 - 5.7	---	---	---	---	5.7	(1)	2.0	(1)	---	---
N	%	---	1.25 \pm 0.04	(7)	1.27	1.19 - 1.30	---	---	---	---	---	---	---	---	1.24	(2) TCGS
N	%	---	---	---	---	---	---	---	---	---	---	---	---	---	1.72	(1) IC
N	%	---	---	---	---	---	---	---	---	---	---	---	---	---	1.19	(1) CHEML
N	%	---	---	---	---	---	---	---	---	---	---	---	---	---	1.28	(2) CB
Na	ug/g	---	828 \pm 77	(25)	825	680 - 1000	840 \pm 36	(3)	800 \pm 80	(15)	856 \pm 54	(4)	882	(2)	915	(1) CPAA
Nb	ug/g	---	4.0	(1)	---	---	---	---	---	---	---	---	4.0	(1)	---	---
Nd	ug/g	---	12 \pm 2	(8)	11.8	10 - 15.6	---	---	13 \pm 2	(5)	13	(1)	11	(1)	---	---
Ni	ug/g	19.4 \pm 1	18.5 \pm 2.0	(21)	19	15.7 - 23	18.6 \pm 1.5	(10)	21	(2)	17.3 \pm 1.6	(4)	19 \pm 3	(3)	11.8	(1) TCGS
Ni	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	26	(1) PAA
O	%	---	18.8 \pm 0.8	(3)	18.4	18.31 - 19.8	---	---	---	---	---	---	---	---	16	(1) DCPES
P	ug/g	---	250 \pm 40	(6)	205	85 - 285	280	(1)	---	---	190 \pm 90	(5)	240	(2)	18.8 \pm 0.8	(3) 14MMA
Pb	ug/g	12.4 \pm 0.6	12.2 \pm 1.4	(20)	12.1	8.3 - 15.3	12.4 \pm 0.7	(11)	---	---	9.6 \pm 2.5	(3)	13 \pm 4	(4)	11.2	(1) IDMS
Pb	ug/g	---	---	---	0.5	0.449 - 0.80	---	---	---	---	---	---	---	---	12	(1) DCPES
Pb-210	pCi/g	---	0.58 \pm 0.19	(3)	---	---	---	---	---	---	---	---	---	---	0.474	(2) NM
Po-210	pCi/g	---	0.50	(1)	---	---	---	---	---	---	---	---	---	---	0.50	(1) RAS
Pr	ug/g	---	3.15	(2)	---	3.0 - 3.3	---	---	---	---	---	---	---	---	---	---
Pr	ug/g	---	0.41	(1)	---	---	---	---	---	---	3.3	(1)	3.0	(1)	---	---
Ra-226	pCi/g	---	---	---	---	---	---	---	---	---	---	---	---	---	0.41	(1) GAMMA
Rb	ug/g	31	30 \pm 2	(13)	29	26.9 - 34	---	---	29.2 \pm 1.6	(10)	---	---	31.5	(2)	29	(1) PAA
S	%	1.64	1.55 \pm 0.05	(13)	1.57	1.48 - 1.62	---	---	1.5	(2)	---	---	1.54 \pm 0.07	(4)	1.42	(2) IC
S	%	---	---	---	---	---	---	---	---	---	---	---	---	---	1.59	(2) TCGS
Sb	ng/g	580	600 \pm 45	(16)	600	460 - 690	587 \pm 23	(3)	600 \pm 50	(13)	---	---	1000	(1)	---	---
Sc	ug/g	6.3	6.3 \pm 0.3	(17)	6.2	5.7 - 6.9	---	---	6.3 \pm 0.3	(15)	5.7	(1)	5.8	(2)	---	---
Se	ug/g	2.6 \pm 0.7	2.7 \pm 0.2	(19)	2.65	2.4 - 3.12	2.7 \pm 0.2	(6)	2.8 \pm 0.2	(10)	---	---	2.4	(1)	2.59	(1) AF
Si	%	---	5.87 \pm 0.22	(9)	5.912	5.5 - 6.21	5.80 \pm 0.37	(3)	---	---	5.89 \pm 0.20	(3)	5.92	(1)	5.92	(2) TCGS
Sm	ug/g	---	2.4 \pm 0.3	(16)	2.5	1.9 - 2.8	---	---	2.6 \pm 0.2	(12)	2.6	(1)	2.0	(1)	2.1	(2) TCGS
Sn	ug/g	---	4 \pm 4	(3)	2.3	1.0 - 8.08	5.19	(2)	---	---	---	---	1.0	(1)	---	---
Sr	ug/g	---	85 \pm 6	(10)	83.6	76.4 - 95.5	---	---	84 \pm 6	(8)	72	(2)	90	(1)	---	---
Ta	ng/g	---	420 \pm 40	(8)	400	360 - 460	---	---	420 \pm 40	(8)	---	---	---	---	---	---
Tb	ng/g	---	311 \pm 17	(9)	310	290 - 330	---	---	312 \pm 18	(8)	300	(1)	---	---	---	---
Te	ng/g	---	500	(1)	---	---	500	(1)	---	---	---	---	---	---	---	---
Th	ug/g	4.5 \pm 0.1	4.5 \pm 0.2	(16)	4.48	4.2 - 5.0	---	---	4.49 \pm 0.22	(14)	4.4	(1)	5.0	(1)	---	---
Th-228	pCi/g	---	0.499	(1)	---	---	---	---	---	---	---	---	---	---	0.499	(1) NM
Th-230	pCi/g	---	0.452	(1)	---	---	---	---	---	---	---	---	---	---	0.452	(1) NM
Th-232	pCi/g	---	0.442	(2)	---	0.40 - 0.484	---	---	---	---	---	---	---	---	0.484	(1) NM
Ti	ug/g	1750	1630 \pm 130	(21)	1620	1310 - 1900	1760	(1)	1630 \pm 70	(8)	1540 \pm 160	(5)	1830 \pm 280	(4)	1850	(2) COLOR
Tl	ug/g	---	< 1	---	---	---	---	---	---	---	---	---	< 1	---	---	---
Tm	ng/g	---	390	(2)	---	380 - 400	---	---	380	(1)	400	(1)	---	---	---	---
U	ug/g	1.28 \pm 0.02	1.26 \pm 0.08	(23)	1.28	1.1 - 1.45	---	---	1.26 \pm 0.08	(22)	1.3	(1)	1.0	(1)	---	---
U-234	pCi/g	---	0.448	(1)	---	---	---	---	---	---	---	---	---	---	0.448	(1) NM
U-235	pCi/g	---	0.0228	(1)	---	---	---	---	---	---	---	---	---	---	0.0228	(1) NM
U-238	pCi/g	---	0.444	(1)	---	---	---	---	---	---	---	---	---	---	0.444	(1) NM
V	ug/g	44 \pm 3	44 \pm 2	(27)	44	39 - 49.6	44 \pm 3	(10)	44 \pm 3	(11)	42 \pm 2	(3)	44.5	(2)	47	(2) AE+AF
W	ng/g	---	880 \pm 90	(6)	790	780 - 1000	---	---	880 \pm 90	(6)	---	---	---	---	---	---
Y	ug/g	---	9.2 \pm 0.8	(3)	9.5	8.3 - 9.7	---	---	---	---	9.0	(2)	9.5	(1)	---	---
Yb	ug/g	---	1.08 \pm 0.09	(11)	1.1	0.9 - 1.2	---	---	1.10 \pm 0.08	(10)	0.9	(1)	---	---	---	---
Zn	ug/g	28 \pm 2	27.2 \pm 1.4	(19)	27.6	24.3 - 30	26.8 \pm 1.5	(9)	28.2 \pm 2.3	(5)	27.7 \pm 0.5	(3)	27.3 \pm 1.2	(3)	---	---
Zr	ug/g	---	53 \pm 5	(3)	55	47 - 57	---	---	47	(1)	---	---	55	(1)	57	(1) PAA

TABLE 1632A-2: INDIVIDUAL DATA FOR NBS SRM 1632A (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ag (ng/g)</u>					<u>As (ug/g) cont.</u>				
<	1500		ITNA	86GLA 01	9.21	0.15		ITNA	86GLA 01
<	3000	L	WXRF	82MIL 01	9.27			AF	82WIL 01
300			ITNA	79CAH 01	9.34			FAA	82WIL 01
<u>Al (%)</u>					9.4	1.3		ITNA	83OBR 01
2.74		34	AA	83BET 01	9.4	1.3		ITNA	79CAH 01
2.8	0.27		CPXRF	80KIR 01	9.5		11	HAA	82CRO 03
2.81	0.02	34	AA	83BET 01	9.54	0.64		HAA	82NAD 01
2.82	0.13		ITNA	83JER 01	9.6		11	FAA	82EBD 02
2.86	0.03		ICPES	85HAR 01	9.7	0.3		ITNA	85GAU 04
2.9	0.05		TCGS	79AND 01	9.8		11	FAA	82EBD 02
2.9	0.12		ITNA	82JER 01	9.8		11	HAA	82CRO 03
2.9	0.3		ITNA	80GER 01	9.9	0.5		PAA	80GER 01
2.91	0.05		ITNA	86GLA 01	10.2	0.4		ITNA	81JIN 01
2.93	0.03		AA	82NAD 02	11	2		ITNA	80GER 01
2.95	0.04		XRF	79CAH 01	11.1	1.3		ITNA	85SUN 01
2.96	0.14		ITNA	85SUN 01	<u>ASH (%)</u>				
2.97	0.04		IENA	85GLA 02	21.7			UU	85SHI 01
2.99	0.06		ITNA	83OBR 01	21.7			UU	82EBD 02
2.99	0.14		ITNA	84GLA 02	21.8		34	CB	82MIL 01
3	0.01		ICPES	84NAD 01	22		11	AA	84NAK 01
3	0.05		ICPES	82NAD 02	22			CB	82KAM 01
3	0.1		AA	83RAP 01	<u>Au (ng/g)</u>				
3.01	0.13		TCGS	79FAI 01	<	8		ITNA	86GLA 01
3.01	0.13	D	TCGS	80GER 01	<	50	L	ITNA	79CAH 01
3.01	0.13	D	TCGS	80AND 01	3	1		ITNA	80KOS 01
3.0576	0.0106		ICPES	85PEA 01	<u>B (ug/g)</u>				
3.06	0.08		ITNA	85AKA 01	22	3		ICPES	81NAD 01
3.07	0.13		ITNA	80GAR 01	50.9	0.5		TCGS	79AND 01
3.1			ITNA	84CLE 01	52	19		ITNA	82SCH 05
3.1	0.06		AA	82KAM 01	52.7	1.8		TCGS	79FAI 01
3.33			CPAA	83BIR 01	53	2		TCGS	80AND 01
9.47			EXRF	82EBD 02	53	2	D	TCGS	80GER 01
<u>As (ug/g)</u>					54			TCGS	85GAU 04
6.4	2.1		CPXRF	80KIR 01	55			OES	83MIL 01
7.6		11	FAA	82EBD 02	55	4	35	TCGS	81GLA 04
8.3	1		ITNA	83JER 01	<u>Ba (ug/g)</u>				
8.4		11	FAA	82EBD 02	97	7		ITNA	84TU 01
8.7	0.2		ITNA	82JER 01	100	13		ITNA	81JIN 01
8.7	0.3		HAA	85LIN 02	102	1		ICPES	84NAD 01
8.88	1.22		ICPES	81NAD 01	102	6		ITNA	84SUZ 02
9		11	FAA	82EBD 02	112	3		ICPES	85HAR 01
9	0.4		ITNA	80KOS 01	116	7	5	ITNA	80TOU 01
9	0.4		ITNA	81KUL 01	119	27		ITNA	85SUN 01
9	0.9		ITNA	84CHA 02					
9.2		34	WXRF	82MIL 01					
9.2	0.5		AA	83RAP 01					
9.2	1.2		ITNA	84TU 01					

TABLE 1632A-2: INDIVIDUAL DATA FOR NBS SRM 1632A (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ba (ug/g) cont.</u>					<u>C-Fixed (%)</u>				
120	10		ICPES	82NAD 02	43		11	AA	84NAK 01
122	11		ITNA	80GER 01					
125		34	WXRF	82MIL 01	<u>Ca (ug/g)</u>				
126	11		ITNA	82JER 01	2100	100		PAA	80GER 01
132	7		ITNA	85AKA 01	2160	130		ITNA	82JER 01
136	16		ITNA	85GAU 04	2200	300		ITNA	84GLA 02
138	20		ITNA	79CAH 01	2240	30		ICPES	85HAR 01
150	26		ITNA	80GAR 01	2300	30		AA	82NAD 02
170	15		ITNA	84CHA 02	2300	100		XRF	79CAH 01
<u>Be (ug/g)</u>					2300	200		AA	82KAM 01
1.48	0.08	11	AA	82LIN 03	2340	270		ITNA	85SUN 01
1.53	0.04	11	AA	84NAK 01	2400	30		ICPES	82NAD 02
1.63	0.1	11	AA	82LIN 03	2400	100	34	AA	83BET 01
1.7			OES	83MIL 01	2400	200	D	TCGS	80AND 01
1.73	0.15	11	AA	82LIN 03	2400	200	D	TCGS	79AND 01
<u>Bi (ug/g)</u>					2400	200	D	TCGS	80GER 01
<	1	L	WXRF	82MIL 01	2400	200		ITNA	80GER 01
<u>Br (ug/g)</u>					2400	200		TCGS	79FAI 01
38	2		ITNA	83JER 01	2450	140		ITNA	83OBR 01
38.3	4.9		ITNA	84CHA 02	2600		34	AA	83BET 01
39	3		ITNA	84SUZ 02	2600			ITNA	84CLE 01
39.6	1.9		ITNA	83OBR 01	2600	100		ICPES	84NAD 01
40	2		ITNA	84GLA 02	2600	200		ITNA	85AKA 01
40	2.3		ITNA	82JER 01	2652.65			ICPES	85PEA 01
41	4		ITNA	80GER 01	2700	175		ITNA	80GAR 01
42		34	WXRF	82MIL 01	46500			EXRF	82EBD 02
42	1		ITNA	86GLA 01	<u>Cd (ng/g)</u>				
43			ISE	81NAD 01	150	30		TCGS	79AND 01
43	0.6		ITNA	81JIN 01	160		34	FAA	83BET 01
43	7		ITNA	79CAH 01	170	60	34	FAA	83BET 01
43.1	1.1		ITNA	85SUN 01	180	40		AA	83RAP 01
44.5	2.7	5	IENA	79GLA 02	200	50		ITNA	80KOS 01
44.9	0.9	5	IENA	79GLA 02	210	30		TCGS	79FAI 01
50	4	5	ITNA	80TOU 01	210	30	D	TCGS	80GER 01
60			ISE	83NAD 01	210	30	D	TCGS	80AND 01
<u>C (%)</u>					<u>Ce (ug/g)</u>				
61.3		14	CB	85NAD 01	25.7	7.2		CPXRF	80KIR 01
62.08	0.1	14	CB	85NAD 01	26	1.7		ITNA	79CAH 01
62.7	0.06		CB	80SCH 02	26	3		ITNA	85AKA 01
65	4		TCGS	79AND 01	27	4		ITNA	81KUL 01
71	4	D	TCGS	80AND 01	27	4		ITNA	80KOS 01
71	4		TCGS	79FAI 01	28	2		ITNA	84SUZ 02
71	4	D	TCGS	80GER 01	28.5	0.3		ITNA	81JIN 01
					28.5	0.4		ICPES	82CRO 01
					29.7	0.9		ICPES	83MAH 05
					30			ITNA	85GRE 02

TABLE 1632A-2: INDIVIDUAL DATA FOR NBS SRM 1632A (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ce (ug/g) cont.</u>					<u>Co (ug/g) cont.</u>				
30.2	1.2		ITNA	85SUN 01	7.3	1.3	11	AA	84NAK 01
30.8	0.5		ITNA	84TU 01	7.5			ITNA	84CLE 01
31.1	3.4		ITNA	80GAR 01	7.5	0.4		ITNA	79CAH 01
31.8	1.5		ITNA	85GAU 04	8.5	1		ITNA	83JER 01
32		34	WXRF	82MIL 01	<u>Cr (ug/g)</u>				
32	4		ITNA	80GER 01	3.4	0.2		AA	83RAP 01
<u>Cl (ug/g)</u>					12.8	2		ICPES	84NAD 01
700	10		IC	85GEN 01	26	2	11	AA	84NAK 01
700	100		XRF	79CAH 01	26	3		ITNA	81KUL 01
704	42		ITNA	85SUN 01	26	6		ITNA	80KOS 01
743	46		IC	83NAD 01	30	2		ICPES	85HAR 01
750	15		ITNA	86GLA 01	30.9	0.6		ITNA	84TU 01
750	60		ITNA	84GLA 02	31			DCPES	85MCC 02
760		34	WXRF	82MIL 01	31.2	3.7		ITNA	84CHA 02
766	30		TCGS	79AND 01	31.8	3.7	11	AA	82LIN 03
770			ISE	83NAD 01	32	1.9		AA	82KAM 01
770	24		ITNA	82JER 01	33	3		ITNA	85AKA 01
770	48		ISE	81NAD 01	33.3			ICPES	81MER 03
776	20		ITNA	83JER 01	33.3	1.6		ITNA	81JIN 01
776	36		ITNA	83OBR 01	33.4	1.5		ITNA	85SUN 01
784	17		TCGS	79FAI 01	33.8		34	FAA	83BET 01
784	17	D	TCGS	80GER 01	33.8	2		ITNA	83JER 01
784	17	D	TCGS	80AND 01	34	2		ITNA	80GER 01
800	70		ITNA	80GER 01	34	3.6		ITNA	82JER 01
897	23		ITNA	80GAR 01	34	4		XRF	85HAR 01
<u>Co (ug/g)</u>					34.4	2.4		ITNA	84SUZ 02
4.4	0.3		ICPES	85HAR 01	34.7	2		ITNA	86GLA 01
5.86	0.21		ITNA	81JIN 01	34.8	6	34	FAA	83BET 01
6		34	WXRF	82MIL 01	35			ITNA	84CLE 01
6.1	0.1		ITNA	84TU 01	35.6	1		ITNA	85GAU 04
6.1	0.4		ITNA	84SUZ 02	36	2		ITNA	79CAH 01
6.3	1.3	34	FAA	83BET 01	36	3.5		CPXRF	80KIR 01
6.4	0.6		AA	83RAP 01	36	6		ITNA	80GAR 01
6.5			ICPES	81MER 03	36.9	1	11	AA	84NAK 01
6.5	0.2		ITNA	80GER 01	36.9	3.3	11	AA	82LIN 03
6.5	0.5		ITNA	81KUL 01	39	8.8		AE+AF	82GOL 01
6.56	0.22		ITNA	85GAU 04	40		34	WXRF	82MIL 01
6.6	0.3		ITNA	86GLA 01	<u>Cs (ug/g)</u>				
6.6	0.5	5	ITNA	80TOU 01	1.9	0.6		ITNA	79CAH 01
6.6	1.1		ITNA	80GAR 01	2	0.3		ITNA	80GER 01
6.7	0.1		ICPES	83MAH 05	2	0.32		ITNA	84CHA 02
6.7	0.9	11	AA	84NAK 01	2.12	0.13		ITNA	84GIB 01
6.71	0.11		ITNA	85SUN 01	2.2	0.1		ITNA	85AKA 01
6.8	0.3		ITNA	80KOS 01	2.27	0.15		ITNA	85GAU 04
7	0.4		ITNA	85AKA 01	2.3	0.11		ITNA	81JIN 01
7.1	0.5		ITNA	84CHA 02	2.33	0.07		ITNA	85SUN 01
7.3		34	FAA	83BET 01	2.4	0.2		ITNA	81KUL 01

TABLE 1632A-2: INDIVIDUAL DATA FOR NBS SRM 1632A (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Cs (ug/g) cont.</u>					<u>Eu (ng/g)</u>				
2.4	0.8		ITNA	80GAR 01	410	50		ITNA	85AKA 01
2.47	0.12		ITNA	84TU 01	460	20		ITNA	83OBR 01
2.5		34	WXRF	82MIL 01	490	10		ICPES	82CRO 01
2.5	0.2		IENA	80KOS 01	490	50		ITNA	84CHA 02
2.9	1.4		ITNA	84SUZ 02	500	40		ITNA	84SUZ 02
<u>Cu (ug/g)</u>					510	30		ITNA	81JIN 01
14			DCPES	85MCC 02	510	70		ITNA	86GLA 01
14.5	0.5		XRF	85HAR 01	510	82		ITNA	80GAR 01
15	0.45		AA	82KAM 01	540	40		ITNA	85GAU 04
15.3	0.9	11	AA	84NAK 01	540	80		ITNA	80KOS 01
15.4	1.9		ITNA	84SUZ 02	540	80		ITNA	81KUL 01
15.5	0.7		ICPES	85HAR 01	550	30		ITNA	79CAH 01
15.7	1.6	11	AA	84NAK 01	550	30		ITNA	80GER 01
15.8	0.6	11	AA	82LIN 03	600			ITNA	85GRE 02
15.9	0.4		AA	79CAH 01	610	30		ITNA	85SUN 01
16	2.1		CPXRF	80KIR 01	<u>F (ug/g)</u>				
16.1	0.6		AA	83RAP 01	84	8		ISE	81NAD 01
16.3		34	FAA	83BET 01	95			ISE	83KNA 01
16.3	0.2		ICPES	83MAH 05	164			CPAA	83BIR 01
16.4			ICPES	81MER 03	176	14		CPAA	85CLA 02
16.6	0.6	11	AA	82LIN 03	177			ISE	82MCG 01
16.7	2	34	FAA	83BET 01	178			SSMS	85CLA 02
17		34	WXRF	82MIL 01	200			ISE	83NAD 01
17.2	3		FAA	80LAN 01	210	10		IC	83NAD 01
19.8	1.5		ICPES	84NAD 01	<u>Fe (%)</u>				
<u>Dy (ug/g)</u>					0.89	0.03		ICPES	84NAD 01
<	2.5	L	WXRF	82MIL 01	1.00			ITNA	84CLE 01
1.83	0.11		ITNA	83OBR 01	1.03	0.14		ITNA	84CHA 02
1.98	0.53	5	ITNA	80TOU 01	1.07	0.01		ICPES	85HAR 01
2	0.1		ITNA	82JER 01	1.07	0.03		XRF	79CAH 01
2.1	0.1		ICPES	82CRO 01	1.08	0.02		ITNA	83JER 01
2.11	0.11		ITNA	86GLA 01	1.08	0.08	34	AA	83BET 01
2.13	0.15		ITNA	85SUN 01	1.09	0.08		ITNA	84SUZ 02
2.2	0.1		ITNA	79CAH 01	1.10		34	AA	83BET 01
2.2	0.1		ITNA	84SUZ 02	1.10	0.02		ITNA	81JIN 01
2.2	0.3		ITNA	80GER 01	1.10	0.02		ICPES	83MAH 05
2.56	0.26		ITNA	80GAR 01	1.10	0.06		ITNA	81KUL 01
<u>Er (ug/g)</u>					1.10	0.1		ITNA	85AKA 01
<	3	L	WXRF	82MIL 01	1.10	0.3		ITNA	82JER 01
0.91	0.05		ICPES	82CRO 01	1.104	0.01		ITNA	84TU 01
					1.11	0.02		AA	82NAD 02
					1.11	0.06	D	TCGS	80AND 01
					1.11	0.06		TCGS	79FAI 01
					1.11	0.06	D	TCGS	80GER 01
					1.1114	0.028		ICPES	85PEA 01
					1.12	0.01		ICPES	82NAD 02
					1.12	0.01		ITNA	80KOS 01

TABLE 1632A-2: INDIVIDUAL DATA FOR NBS SRM 1632A (cont.)

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TABLE 1632A-2: INDIVIDUAL DATA FOR NBS SRM 1632A (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>K (ug/g)</u>					<u>Li (ug/g)</u>				
3400	100		ITNA	83JER 01	35			OES	83MIL 01
3700			XRF	79CAH 01	36.2	0.1		AA	79CAH 01
3800	50		ITNA	83OBR 01	37	1		ICPES	84NAD 01
3900	100		ICPES	84NAD 01	47			CPAA	83BIR 01
4000	200		ITNA	81JIN 01	<u>Lu (ng/g)</u>				
4000	900		ITNA	84CHA 02	134	13		ITNA	80KOS 01
4100	80		AA	82KAM 01	150	10		ICPES	82CRO 01
4100	100		TCGS	79AND 01	163	10		ITNA	84CHA 02
4100	200		ICPES	82NAD 02	170	20		ITNA	85SUN 01
4100	500		ITNA	86GLA 01	170	30		ITNA	85AKA 01
4120	50		ITNA	85SUN 01	173	12		ITNA	86GLA 01
4200		34	AA	83BET 01	174	24		ITNA	84SUZ 02
4200	150		AA	82NAD 02	177	10		ITNA	85GAU 04
4200	200	D	TCGS	80GER 01	180			ITNA	85GRE 02
4200	200		TCGS	79FAI 01	180	30		ITNA	80GER 01
4200	200	D	TCGS	80AND 01	180	70		ITNA	80GAR 01
4200	200		ITNA	79CAH 01	190	20		ITNA	81JIN 01
4200	200		ITNA	80GER 01	220	40		ITNA	79CAH 01
4200	400	34	AA	83BET 01	<u>Mg (ug/g)</u>				
4300	645		ITNA	80GAR 01	600	300		XRF	79CAH 01
4400	300		ITNA	85AKA 01	870	10		ICPES	84NAD 01
4523.5	166		ICPES	85PEA 01	910			DCPES	85MCC 02
4700	300		ICPES	85HAR 01	980	40		ICPES	85HAR 01
14900			EXRF	82EBD 02	990	30		AA	82KAM 01
<u>K-40 (pCi/g)</u>					990	40		AA	82NAD 02
2.7	0.2		GAMMA	84ROS 03	1020	10		ICPES	82NAD 02
<u>La (ug/g)</u>					1052			ICPES	85PEA 01
8.88	0.74		ITNA	84CHA 02	1100	100	34	AA	83BET 01
10.9	0.5		ITNA	80KOS 01	1300		34	AA	83BET 01
11.4	0.6		ITNA	84SUZ 02	1300	300		ITNA	80GER 01
12.8	0.5		ITNA	83OBR 01	1400	100		ITNA	85GLA 02
13.03	0.3		ITNA	81JIN 01	1400	220		ITNA	80GAR 01
14.2	0.1		ITNA	86GLA 01	1600	700		ITNA	85AKA 01
14.5	0.2		ICPES	82CRO 01	1714			CPAA	83BIR 01
15			ITNA	85GRE 02	19900			EXRF	82EBD 02
15	2.6		ITNA	80GAR 01	<u>Mn (ug/g)</u>				
15.1	1.2		ITNA	79CAH 01	20	4.3		CPXRF	80KIR 01
15.2	0.8		ICPES	83MAH 05	23			ITNA	84CLE 01
15.4	0.6		ITNA	85SUN 01	26	2	34	FAA	83BET 01
15.6	0.4		ICPES	85HAR 01	26	6		AE+AF	82GOL 01
15.9	0.6		ITNA	85GAU 04	27	2		ITNA	83JER 01
17	1		ITNA	85AKA 01	27.1	0.4		ICPES	83MAH 05
18	2		ITNA	80GER 01	27.3	1.4		ITNA	82JER 01
19		34	WXRf	82MIL 01	27.4	2.5		ITNA	84CHA 02
19	2		ITNA	83JER 01	28			ESR	85SHI 01
21	1		ITNA	82JER 01					

TABLE 1632A-2: INDIVIDUAL DATA FOR NBS SRM 1632A (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Mn (ug/g) cont.</u>					<u>Na (ug/g)</u>				
28		34	WXRF	82MIL 01	680	38		ITNA	79CAH 01
28	0.56		AA	82KAM 01	700	100		ITNA	85AKA 01
28	1		ICPES	85HAR 01	720	40		ITNA	83OBR 01
28.4	0.8		ITNA	85SUN 01	760	160		ITNA	84GLA 02
28.5	2.34	11	AA	84NAK 01	780	27		ITNA	84CHA 02
28.6	0.7	11	AA	84NAK 01	787	40		ITNA	83JER 01
29			DCPES	85MCC 02	799	15		ITNA	82JER 01
29	1		ITNA	84GLA 02	800	50		AA	82NAD 02
29	1		ICPES	84NAD 01	808.78			ICPES	85PEA 01
29	3		ITNA	85AKA 01	810	30		ICPES	82NAD 02
29	5	D	TCGS	80GER 01	811	5		ITNA	86GLA 01
29	5	D	TCGS	80AND 01	825		34	WXRF	82MIL 01
29	5		TCGS	79FAI 01	850		34	AA	83BET 01
29.1	0.6		ITNA	86GLA 01	850	40		ITNA	80GER 01
30.3	0.7	11	AA	82LIN 03	858	22		ITNA	85GAU 04
30.9	0.9	11	AA	82LIN 03	858	39		ITNA	85SUN 01
31		34	FAA	83BET 01	860			ITNA	81JIN 01
31	3		AA	83RAP 01	870	60	34	AA	83BET 01
31.5	1.1		ITNA	83OBR 01	884	32		ITNA	80GAR 01
32	3		ITNA	80GER 01	894	15		ICPES	84NAD 01
32	9		ITNA	79CAH 01	910	40		ICPES	85HAR 01
33.7	1.2		ITNA	80GAR 01	915			CPAA	83BIR 01
34			ICPES	82NAD 02	940	260		XRF	79CAH 01
720			EXRF	82EBD 02	1000			ITNA	84CLE 01
<u>Mo (ug/g)</u>					1025	125		ITNA	82SCH 05
<	4	L	ITNA	79CAH 01	4450			EXRF	82EBD 02
<	6		ITNA	86GLA 01	<u>Nb (ug/g)</u>				
2		34	WXRF	82MIL 01	4		34	WXRF	82MIL 01
5.7	0.1		ICPES	83MAH 05	<u>Nd (ug/g)</u>				
<u>N (%)</u>					10	2		ITNA	80GER 01
1.19	0.08		CHEML	81NAD 01	11		34	WXRF	82MIL 01
1.2	0.1		TCGS	79AND 01	11.7	2.1		ITNA	85SUN 01
1.26	0.03		CB	80SCH 02	11.8	0.4	D	TCGS	80AND 01
1.27			TITR	85NAD 01	11.8	0.4		TCGS	79FAI 01
1.27	0.08	D	TCGS	80AND 01	12			ITNA	85GRE 02
1.27	0.08	D	TCGS	80GER 01	13	0.1		ICPES	82CRO 01
1.27	0.08		TCGS	79FAI 01	14.2	2		ITNA	84SUZ 02
1.285	0.014		POT	84RIC 01	15.6	3.7		ITNA	81JIN 01
1.3	0.03		CB	85NAD 01					
1.72	0.06		IC	83NAD 01					

TABLE 1632A-2: INDIVIDUAL DATA FOR NBS SRM 1632A (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ni (ug/g)</u>					<u>Pb (ug/g) cont.</u>				
15.7	0.6		AA	79CAH 01	12	0.5	11	AA	84NAK 01
16			DCPES	85MCC 02	12.1	0.4		AA	83RAP 01
16	2		ICPES	85HAR 01	12.1	0.6	11	AA	82LIN 03
16.2	0.1	11	AA	82LIN 03	12.2		6	FAA	84FUD 01
16.4	0.4		XRF	85HAR 01	12.4	0.4		HAA	82NAD 01
16.6			ICPES	84NAD 01	12.4	2	34	FAA	83BET 01
17.1			ICPES	81MER 03	12.9	1.7		POT	84PIN 01
18	3.4		CPXRF	80KIR 01	13		34	WXRF	82MIL 01
18.7	2.1		AA	83RAP 01	13	0.52		AA	82KAM 01
18.9	1.2	11	AA	84NAK 01	13.1		34	FAA	83BET 01
19	0.57		AA	82KAM 01	13.7			EXRF	84PIN 01
19	3.5		AE+AF	82GOL 01	13.9	1.5	11	AA	84NAK 01
19.2		34	FAA	83BET 01	15.3	2.5		AA	79CAH 01
19.3	0.7	11	AA	82LIN 03	16.8	0.4		XRF	85HAR 01
19.4	1.4		ITNA	81JIN 01	<u>Pb-210 (pCi/g)</u>				
19.5	3.2	11	AA	84NAK 01	0.449	0.024	D	NM	81CAS 01
19.6	0.2		ICPES	83MAH 05	0.449	0.024		NM	80CAS 01
19.6	2	34	FAA	83BET 01	0.5	0.2		NM	84ROS 03
20.4	2		FAA	80LAN 01	0.8	0.2		GAMMA	84ROS 03
22		34	WXRF	82MIL 01	<u>Po-210 (pCi/g)</u>				
23	4		ITNA	79CAH 01	0.5	0.2		RAS	84ROS 03
26	4		PAA	80GER 01	<u>Pr (ug/g)</u>				
<u>O (%)</u>					3		34	WXRF	82MIL 01
18.31	0.23	34	14NAA	80KHA 02	3.3	0.1		ICPES	82CRO 01
18.4	0.7		14NAA	80NAD 01	<u>Ra-226 (pCi/g)</u>				
19.8	0.32	35	14NAA	80KHA 02	0.41	0.06		GAMMA	84ROS 03
<u>P (ug/g)</u>					<u>Rb (ug/g)</u>				
85	17		ICPES	81NAD 01	26.9			ITNA	84GIB 01
103	3		ICPES	85HAR 01	28.2	1.1		ITNA	81JIN 01
192	2		ICPES	84NAD 01	28.8	1.2		ITNA	85SUN 01
205		34	WXRF	82MIL 01	29		34	WXRF	82MIL 01
280			AA	82NAD 02	29	1		ITNA	80GER 01
280	50		ICPES	82NAD 02	29	1		PAA	80GER 01
280	80		XRF	79CAH 01	29	5	5	ITNA	80TOU 01
285	87		ICPES	85PEA 01	29	5		ITNA	81KUL 01
1310			EXRF	82EBD 02	29	5		ITNA	80KOS 01
<u>Pb (ug/g)</u>					29.1	0.8		ITNA	85GAU 04
6.9	0.9		ICPES	81NAD 01	30	2		ITNA	79CAH 01
8.3	1.9		CPXRF	80KIR 01	33	2		ITNA	85AKA 01
10	2		ICPES	85HAR 01	34	4.6		CPXRF	80KIR 01
11.2	0.3		IDMS	83BRO 01	34.8	2.5		ITNA	84CHA 02
11.4	0.2	11	AA	82LIN 03					
11.5		6	FAA	84FUD 01					
11.8	0.2		ICPES	83MAH 05					
12			DCPES	85MCC 02					

TABLE 1632A-2: INDIVIDUAL DATA FOR NBS SRM 1632A (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>S (%)</u>					<u>Sc (ug/g) cont.</u>				
0.09			ICPES	85PEA 01	6.2		34	WXRF	82MIL 01
1.19	0.01		XRF	79CAH 01	6.2	0.2		ITNA	79CAH 01
1.37	0.01		IC	83NAD 01	6.2	0.3		ITNA	86GLA 01
1.48			XRF	83NAD 01	6.3	0.1		ITNA	80KOS 01
1.48	0.003		IC	85GEN 01	6.3	0.2	5	ITNA	80TOU 01
1.48	0.07		XRF	81NAD 01	6.4	0.2		ITNA	83JER 01
1.5	0.7		ITNA	82JER 01	6.42	0.25		ITNA	84CHA 02
1.5	0.7		NAA	81HO 02	6.56	0.23		ITNA	80GAR 01
1.57	0.01		CB	86GAU 01	6.7	0.05		ITNA	81JIN 01
1.58	0.02		CB	85GLA 03	6.8	0.6		ITNA	80GER 01
1.59	0.02	D	TCGS	80AND 01	6.9	0.9	5	ITNA	80TOU 01
1.59	0.02	D	TCGS	80GER 01	<u>Se (ug/g)</u>				
1.59	0.02		TCGS	79FAI 01	1.9	0.5		ITNA	86GLA 01
1.59	0.03		CPAA	84LAN 02	2.4		34	WXRF	82MIL 01
1.59	0.09		TCGS	79AND 01	2.4	0.2		AA	83RAP 01
1.6	0.02		XRF	84WEB 01	2.4	0.3		RTNA	80KNA 01
1.6	0.07		CPXRF	80KIR 01	2.54	0.45		ITNA	84CHA 02
1.62			UU	82EBD 02	2.55	0.29		FAAC	85WOO 01
<u>Sb (ng/g)</u>					2.57	0.05		IENA	80KOS 01
410	150		HAA	82NAD 01	2.58			FAA	82WIL 01
460			ITNA	84GIB 01	2.59			AF	82WIL 01
520	30		ITNA	82JER 01	2.6	0.3		ITNA	80GER 01
530	50		ITNA	81KUL 01	2.65	0.02	7	HAA	84IMA 01
530	50		ITNA	80KOS 01	2.65	0.1	D	HAA	84IMA 03
560	40		AA	83RAP 01	2.69	0.4		RTNA	84DEL 01
580	40		ITNA	86GLA 01	2.7	0.3		HAA	85LIN 01
600		11	HAA	82CRO 03	2.7	0.3		HAA	85LIN 02
600			ITNA	84CLE 01	2.7	0.4		ITNA	84SUZ 02
600		11	HAA	82CRO 03	2.9	0.2		ITNA	85AKA 01
600	90		ITNA	80GER 01	3	0.1		ITNA	79CAH 01
620	20		ITNA	83JER 01	3	0.4		ITNA	84TU 01
620	50		ITNA	84TU 01	3.1			ITNA	84CLE 01
620	80		ITNA	81JIN 01	3.12	0.17		HAA	82NAD 01
630	60		ITNA	84CHA 02	3.62	0.52		ITNA	85SUN 01
640	150		ITNA	85SUN 01	<u>Si (%)</u>				
650	90		ITNA	85GAU 04	3.1	0.14		CPXRF	80KIR 01
690	50	5	ITNA	80TOU 01	5.5	0.4	34	AA	83BET 01
800	50		ITNA	79CAH 01	5.68	0.01		ICPES	84NAD 01
1000		34	WXRF	82MIL 01	5.7		34	AA	83BET 01
<u>Sc (ug/g)</u>					5.8	0.1	D	TCGS	80AND 01
5.3	1.2		CPXRF	80KIR 01	5.8	0.1		TCGS	79FAI 01
5.7	0.2		ICPES	85HAR 01	5.8	0.1	D	TCGS	80GER 01
5.9	0.2		ITNA	82JER 01	5.9122	0.0187		ICPES	85PEA 01
6	0.3		ITNA	81KUL 01	5.92	0.01		XRF	79CAH 01
6.06	0.11		ITNA	85SUN 01	6.05	0.2		TCGS	79AND 01
6.1	0.4		ITNA	85AKA 01	6.09	0.07		ICPES	82NAD 02
6.14	0.2		ITNA	85GAU 04	6.21	0.08		AA	82NAD 02
					27.79			EXRF	82EBD 02

TABLE 1632A-2: INDIVIDUAL DATA FOR MBS SRM 1632A (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Sm (ug/g)</u>					<u>Tb (ng/g)</u>				
1.1	0.1		ITNA	80KOS 01	290	30		ITNA	81JIN 01
1.9	0.1	5	ITNA	80TOU 01	290	60		ITNA	86GLA 01
2		34	WXRF	82MIL 01	300			ITNA	85GRE 02
2.1	0.05		TCGS	79AND 01	300	100		ICPES	82CRO 01
2.1	0.07		TCGS	79FAI 01	310	30		ITNA	84SUZ 02
2.1	0.07	D	TCGS	80AND 01	320	50		ITNA	80GER 01
2.1	0.07	D	TCGS	80GER 01	330	40		ITNA	79CAH 01
2.2	0.1		ITNA	85AKA 01	330	40		ITNA	85SUN 01
2.28	0.08		ITNA	85GAU 04	330	120		ITNA	84CHA 02
2.4			ITNA	85GRE 02	<u>Te (ng/g)</u>				
2.4	0.05		ITNA	85SUN 01	<	600	L	WXRF	82MIL 01
2.5	0.4		ITNA	80GAR 01	<	830		ITNA	84SUZ 02
2.57	0.09		ITNA	81JIN 01	500	50		HAA	82NAD 01
2.6	0.1		ITNA	79CAH 01	<u>Th (ug/g)</u>				
2.6	0.1		ICPES	82CRO 01	3.1	0.5		CPXRF	80KIR 01
2.62	0.13		ITNA	83OBR 01	3.77	0.38		ITNA	84CHA 02
2.7	2		ITNA	83JER 01	4.2	0.2	5	ITNA	80TOU 01
2.8	0.3		ITNA	80GER 01	4.2	0.3		ITNA	79CAH 01
3.1	0.3		ITNA	84SUZ 02	4.3			ITNA	82JER 01
<u>Sn (ug/g)</u>					4.3	0.3		ITNA	80KOS 01
1		34	WXRF	82MIL 01	4.3	0.9		ITNA	81KUL 01
2.3			FAA	84LON 01	4.4	0.1		ICPES	83MAH 05
8.08	1.02		HAA	82NAD 01	4.4	0.5		ITNA	84SUZ 02
84.2	2.6		ITNA	85SUN 01	4.48	0.04		ITNA	81JIN 01
<u>Sr (ug/g)</u>					4.5	0.02		IENA	85BEL 01
60	1		ICPES	84NAD 01	4.5	0.3		ITNA	85AKA 01
76.4	12.8		ITNA	85SUN 01	4.6	0.2		ITNA	86GLA 01
79	9		ITNA	82JER 01	4.63	0.07		ITNA	85SUN 01
80	11		ITNA	84TU 01	4.8	0.2		ITNA	80GER 01
83.6	7.8		ITNA	83OBR 01	4.8	0.6		ITNA	80GAR 01
84	2		ICPES	85HAR 01	4.81	0.17		ITNA	85GAU 04
84	9		ITNA	80GER 01	5		34	WXRF	82MIL 01
90		34	WXRF	82MIL 01	<u>Th-228 (pCi/g)</u>				
91	18		ITNA	79CAH 01	0.499	0.011	D	NM	81CAS 01
95.5	11.8		ITNA	81JIN 01	0.499	0.011		NM	80CAS 01
<u>Ta (ng/g)</u>					<u>Th-230 (pCi/g)</u>				
290	50		ITNA	84CHA 02	0.452	0.017		NM	80CAS 01
360	10		ITNA	84SUZ 02	0.452	0.017	D	NM	81CAS 01
390	50		ITNA	85GAU 04	<u>Th-232 (pCi/g)</u>				
390	50		ITNA	79CAH 01	0.40	0.07		GAMMA	84ROS 03
400	30		ITNA	80GER 01	0.484	0.018		NM	80CAS 01
450	40		ITNA	85SUN 01	0.484	0.018	D	NM	81CAS 01
450	50		ITNA	81JIN 01					
460	30		ITNA	84TU 01					
460	90		ITNA	85AKA 01					

TABLE 1632A-2: INDIVIDUAL DATA FOR NBS SRM 1632A (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ti (ug/g)</u>					<u>U (ug/g) cont.</u>				
592	30		ICPES	84NAD 01	1.29	0.04		DNA	85GAU 04
1310	20		ICPES	85HAR 01	1.29	0.07		DNA	86GLA 01
1437.6	119.8		ICPES	85PEA 01	1.3	0.02		ICPES	83MAH 05
1480	30		TCGS	79AND 01	1.3	0.1	35	DNA	81GLA 04
1550	40	D	TCGS	80GER 01	1.3	0.11		ITNA	83OBR 01
1550	40	D	TCGS	80AND 01	1.3	0.12		ITNA	85SUN 01
1550	40		TCGS	79FAI 01	1.31	0.09		ITNA	82JER 01
1560	70		ITNA	83JER 01	1.33	0.04		DNA	86GAU 01
1570	100		ITNA	86GLA 01	1.4			DNA	84GLA 11
1580	80		ITNA	82JER 01	1.45	0.05	35	DNA	81GLA 03
1600		34	WXRF	82MIL 01	1.5	0.13		ITNA	84CHA 02
1600	40		ICPES	82NAD 02	<u>U-234 (pCi/g)</u>				
1620	45		ITNA	83OBR 01	0.448	0.012	D	NM	81CAS 01
1630			ICPES	81MER 03	0.448	0.012		NM	80CAS 01
1630	70		ITNA	80GER 01	<u>U-235 (fCi/g)</u>				
1700	50		ICPES	83MAH 05	22.8	1.9	D	NM	81CAS 01
1700	300		CPXRF	80KIR 01	22.8	1.9		NM	80CAS 01
1720	170		ITNA	80GAR 01	<u>U-238 (pCi/g)</u>				
1756	128		ITNA	85SUN 01	0.444	0.016		NM	80CAS 01
1760			AA	82NAD 02	0.444	0.016	D	NM	81CAS 01
1800	100		XRF	79CAH 01	<u>V (ug/g)</u>				
1800	300	34	COLOR	83BET 01	37.4	3.1	11	AA	82LIN 03
1900		34	COLOR	83BET 01	39	2		ITNA	83JER 01
2230			WXRF	83GAR 01	40.5	0.9		ICPES	85HAR 01
5990			EXRF	82EBD 02	41	2.05		AA	82KAM 01
<u>Tl (ug/g)</u>					41.6	2.2		ITNA	85SUN 01
<	1	L	WXRF	82MIL 01	42	2		ICPES	83MAH 05
<u>Tm (ng/g)</u>					42	2.4	11	AA	82LIN 03
<	1000	L	WXRF	82MIL 01	42	4.2		FAA	80LAN 01
380	40		ITNA	84SUZ 02	43		34	WXRF	82MIL 01
400	100		ICPES	82CRO 01	43	1		ITNA	82JER 01
<u>U (ug/g)</u>					43	4		AA	83RAP 01
1		34	WXRF	82MIL 01	43.4	1.8		ITNA	83OBR 01
1.1	0.2		ITNA	79CAH 01	44			ITNA	84CLE 01
1.12	0.4		ITNA	81KUL 01	44	3		ITNA	80GER 01
1.14	0.07		ITNA	84SUZ 02	44	7	11	AA	84NAK 01
1.16	0.11		ITNA	81JIN 01	44.3			ICPES	81MER 03
1.2	0.1	5	ITNA	80TOU 01	45	2		ITNA	84GLA 02
1.21	0.1		ITNA	80GER 01	45.5	1.6	11	AA	84NAK 01
1.22	0.1		ITNA	83JER 01	46		34	FAA	83BET 01
1.24	0.04		IENA	80KOS 01	46		6	AE+AF	82GOL 01
1.24	0.1		IENA	81KUL 02	46			ITNA	86GLA 01
1.26	0.08		DNA	84GLA 02	46	2			
1.28	0.02		IENA	85BEL 01	46	8	34	FAA	83BET 01
1.28	0.08		DNA	80GAR 01					

TABLE 1632A-2: INDIVIDUAL DATA FOR NBS SRM 1632A (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>V (ug/g) cont.</u>					<u>Zn (ug/g)</u>				
46	8.2		CPXRF	80KIR 01	19	4		ITNA	86GLA 01
46.9	2.5		ITNA	80GAR 01	24.3	4		AA	79CAH 01
48	7	6	AE+AF	82GOL 01	25	2		ITNA	84CHA 02
49			ITNA	85GAU 04	25	3	34	FAA	83BET 01
49.6	1.7	11	AA	82LIN 03	26	0.78		AA	82KAM 01
67	3		ICPES	84NAD 01	26	1		XRF	85HAR 01
<u>W (ng/g)</u>					26.6	0.1	11	AA	82LIN 03
600	200		ITNA	80GER 01	27	6		ITNA	79CAH 01
780	230		ITNA	83OBR 01	27.1			ICPES	81MER 03
790	20		ITNA	84SUZ 02	27.5	3		AA	83RAP 01
890	150		ITNA	81JIN 01	27.6	1.8	11	AA	84NAK 01
920	150		ITNA	85SUN 01	27.6	2.4	11	AA	84NAK 01
1000	300		ITNA	79CAH 01	27.7	1.4	11	AA	82LIN 03
<u>Y (ug/g)</u>					28		34	WXRF	82MIL 01
5.8	0.5		PAA	80GER 01	28	0.4		ICPES	83MAH 05
8.3	0.5		ICPES	82CRO 01	28	1		ICPES	85HAR 01
9.5		34	WXRF	82MIL 01	28	2		ITNA	83JER 01
9.7	0.4		ICPES	85HAR 01	28	3.7		CPXRF	80KIR 01
<u>Yb (ug/g)</u>					29		34	FAA	83BET 01
0.9	0.01		ICPES	82CRO 01	30	3		ITNA	80KOS 01
0.98	0.07		ITNA	81JIN 01	31	6		ITNA	80GER 01
0.98	0.08		ITNA	80GER 01	39	8		ICPES	84NAD 01
1.04	0.17		ITNA	85SUN 01	<u>Zr (ug/g)</u>				
1.09	0.06		ITNA	85GAU 04		<	140	ITNA	86GLA 01
1.1			ITNA	85GRE 02	47	6		ITNA	80GER 01
1.1	0.1	5	ITNA	80TOU 01	55		34	WXRF	82MIL 01
1.13	0.07		ITNA	86GLA 01	57	5		PAA	80GER 01
1.14	0.2		ITNA	84CHA 02					
1.19	0.06		ITNA	84SUZ 02					
1.2	0.1		ITNA	79CAH 01					

TABLE 1632B-1: COMPILED DATA FOR NBS SRM 1632B TRACE ELEMENTS IN COAL
(revised 3/1/86)

ELEMENT	UNITS	NBS	
		Mean \pm	SD
ASH	%	6.79 \pm 0.16	
Al	ug/g	8550 \pm 190	
As	ug/g	3.72 \pm 0.09	
Ba	ug/g	67.5 \pm 2.1	
Br	ug/g	17	
C-Total	%	78.11 \pm 0.37	
Ca	ug/g	2040 \pm 60	
Cd	ng/g	57.3 \pm 2.7	
Ce	ug/g	9	
Cl	ug/g	1260	
Co	ug/g	2.29 \pm 0.17	
Cr	ug/g	11	
Cs	ng/g	440	
Cu	ug/g	6.28 \pm 0.30	
Eu	ng/g	170	
Fe	ug/g	7590 \pm 450	
H	%	5.07 \pm 0.06	
Heat	BTU/lb	14005 \pm 35	
Hf	ng/g	430	
K	ug/g	748 \pm 28	
La	ug/g	5.1	
Li	ug/g	10	
Mg	ug/g	383 \pm 8	
Mn	ug/g	12.4 \pm 1	
Mo	ug/g	0.9	
N	%	1.56 \pm 0.07	
Na	ug/g	515 \pm 11	
Ni	ug/g	6.10 \pm 0.27	
Pb	ug/g	3.67 \pm 0.26	
Rb	ug/g	5.05 \pm 0.11	
S	%	1.89 \pm 0.06	
Sb	ng/g	240	
Sc	ug/g	1.9	
Se	ug/g	1.29 \pm 0.11	
Si	%	1.4	
Sm	ug/g	0.87	
Sr	ug/g	102	
Th	ug/g	1.342 \pm 0.036	
Ti	ug/g	454 \pm 17	
U	ng/g	436 \pm 12	
V	ug/g	14	
Volatile	%	35.4 \pm 1.1	
W	ug/g	480	
Zn	ug/g	11.89 \pm 0.78	

TABLE 1633-1: COMPILED DATA FOR MBS SRM 1633 TRACE ELEMENTS IN COAL FLY ASH (revised 3/1/86)

ELE	UNITS	MBS	CONSENSUS	MEDIAN	RANGE	AA	MAA	ICPES	XRF	PMA	OES		OTHER METHODS	
			Mean \pm SD	Mean \pm SD	Mean \pm SD	Mean \pm SD	Mean \pm SD	Mean \pm SD	Mean \pm SD	Mean \pm SD	Mean \pm SD	SD	Mean \pm SD	Method
Ag	ng/g	---	300 \pm 50	300	258 - 350	350	258	---	---	---	---	---	---	---
Al	%	---	12.6 \pm 0.6 (37)	12.6	11.6 - 14.1	13.0 \pm 0.7 (4)	12.4 \pm 0.6 (17)	12.3 \pm 0.7 (8)	11.7 (1)	---	13.2 \pm 0.7 (3)	---	---	---
As	ug/g	61 \pm 6	61 \pm 4 (59)	60.4	54 - 69.5	61 \pm 4 (7)	60 \pm 4 (28)	60 \pm 8 (5)	64 \pm 2 (3)	62.5 \pm 1.7 (8)	---	---	12.9 (2)	14AAA
As	ug/g	---	---	---	---	---	---	---	---	---	---	---	60 (1)	GDHS
As	ug/g	---	---	---	---	---	---	---	---	---	---	---	61 \pm 11 (3)	SSMS
As	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---
Au	ug/g	---	5.2 \pm 2.6 (3)	4.84	2.75 - 8.0	---	5.2 \pm 2.6 (3)	---	---	---	---	---	---	---
B	ug/g	---	464 \pm 35 (8)	450	320 - 600	---	---	---	---	---	---	---	---	---
B	ug/g	---	---	---	---	---	---	428 (2)	---	---	420 (2)	---	---	---
Ba	ug/g	---	2665 \pm 160 (46)	2660	2300 - 3000	2570 \pm 300 (3)	2670 \pm 130 (29)	2580 \pm 300 (6)	2410 \pm 410 (4)	2605 (2)	3000 (1)	---	---	---
Be	ug/g	12	12.1 \pm 1.0 (18)	12	10.1 - 14	12.2 \pm 0.8 (12)	---	12.3 \pm 1.7 (5)	---	---	12.5 (2)	---	---	---
Bi	ug/g	---	2 \pm 2 (3)	1.08	0.7 - 4.5	---	---	---	7.75 (2)	1.08 (1)	---	---	---	---
Br	ug/g	---	8.4 \pm 2.2 (22)	7.52	5.8 - 12.1	---	---	---	---	---	---	---	---	---
C	%	---	3.3 \pm 0.2 (3)	3.3	3.05 - 3.45	---	8.4 \pm 2.3 (19)	---	---	---	---	---	---	---
C	%	---	4.65 \pm 0.34 (44)	4.62	3.92 - 5.3	4.5 \pm 0.3 (3)	4.48 \pm 0.25 (15)	4.63 \pm 0.13 (7)	4.7 \pm 0.6 (6)	4.8 \pm 0.6 (5)	4.75 (2)	---	---	---
Cd	ug/g	1.45 \pm 0.06	1.47 \pm 0.15 (36)	1.5	1.2 - 1.85	1.46 \pm 0.14 (15)	1.36 \pm 0.20 (5)	1.8 \pm 0.4 (3)	---	1.32 \pm 0.17 (5)	---	---	---	---
Cd	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---
Cd	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---
Ce	ug/g	---	149 \pm 10 (33)	150.6	125 - 176	---	150 \pm 7 (20)	148 (2)	154 \pm 6 (3)	152.7 \pm 0.6 (3)	200 (1)	---	---	---
Cl	ug/g	---	38 \pm 13 (14)	40.6	19.6 - 58	---	40 \pm 13 (10)	---	---	22.3 (2)	---	---	---	---
Co	ug/g	38	40 \pm 3 (44)	40	32 - 48	40 \pm 5 (6)	39.4 \pm 1.9 (24)	37 \pm 10 (7)	---	40 \pm 3 (4)	38 (1)	---	---	---
Cr	ug/g	131 \pm 2	127 \pm 10 (58)	129.2	103 - 159	126 \pm 10 (10)	128 \pm 7 (27)	115 \pm 11 (8)	131 \pm 17 (5)	136 \pm 6 (4)	135 (2)	---	---	---
Cs	ug/g	---	8.6 \pm 0.6 (26)	8.4	7.3 - 10	---	8.5 \pm 0.5 (22)	---	---	8 (1)	---	---	---	---
Cu	ug/g	128 \pm 5	129 \pm 7 (39)	129	115 - 142	126 \pm 4 (11)	128 \pm 12 (6)	130 \pm 7 (8)	130 \pm 6 (7)	138 \pm 3 (3)	110 (1)	---	---	---
Dy	ug/g	---	10.2 \pm 1.1 (12)	10.2	9 - 12.1	---	9.8 \pm 0.8 (10)	---	---	---	---	---	---	---
Er	ug/g	---	34 \pm 48 (3)	11	2.1 - 89	---	89 (1)	---	---	---	---	---	---	---
Eu	ug/g	---	2.64 \pm 0.19 (25)	2.6	2.3 - 3.1	---	2.60 \pm 0.15 (22)	2.5 (2)	---	---	---	---	---	---
F	ug/g	---	17 \pm 6 (3)	20	10 - 20	20 (1)	---	---	---	---	---	---	---	---
Fe	%	---	6.16 \pm 0.27 (60)	6.2	5.53 - 6.8	6.3 \pm 0.4 (8)	6.13 \pm 0.26 (24)	6.12 \pm 0.29 (9)	6.11 \pm 0.12 (8)	6.09 (2)	5.87 \pm 0.30 (3)	---	---	---
Fe	%	---	---	---	---	---	---	---	---	---	---	---	---	---
Ga	ug/g	---	42 \pm 4 (16)	41	34.3 - 50	58 (1)	41 \pm 3 (11)	---	43 \pm 5 (3)	---	---	---	---	---
Gd	ug/g	---	11.6 \pm 0.4 (6)	11.6	11 - 12.1	---	11.5 \pm 0.4 (3)	12.1 (1)	---	---	---	---	---	---
Ge	ug/g	---	24 \pm 3 (7)	25	19 - 26.8	---	---	26.8 (1)	22.5 (2)	---	25 (1)	---	---	---
H	ug/g	---	1100 (2)	---	1000 - 1200	---	---	---	---	---	---	---	---	---
H2O-	%	---	0.03 (1)	---	---	---	---	---	---	---	---	---	---	---
H2O-T	%	---	0.17 (1)	---	---	---	---	---	---	---	---	---	---	---
H2SO4	ug/g	---	< 1000	---	---	---	---	---	---	---	---	---	---	---
Hf	ug/g	---	7.6 \pm 0.5 (21)	7.62	6.5 - 8.2	---	7.6 \pm 0.5 (21)	---	---	---	---	---	---	---
Hg	ug/g	140 \pm 10	136 \pm 17 (15)	137	100 - 170	128 \pm 9 (5)	144 \pm 10 (6)	---	---	167 \pm 34 (5)	---	---	---	---
Ho	ug/g	---	2.0 \pm 0.9 (6)	1.94	0.82 - 3.6	---	1.96 \pm 0.03 (4)	---	---	---	---	---	---	---
I	ug/g	---	2.8 \pm 0.4 (6)	2.9	2 - 3.4	---	2.6 \pm 0.6 (3)	---	---	2.85 (2)	---	---	---	---
In	ug/g	---	220 \pm 80 (10)	16	118 - 320	---	200 \pm 90 (8)	---	---	285 (2)	---	---	---	---
Ir	ug/g	---	17.6 \pm 1.7 (3)	18.6	15.6 - 18.6	---	17.6 \pm 1.7 (3)	---	---	---	---	---	---	---
K	%	1.72	1.69 \pm 0.09 (47)	1.71	1.51 - 1.9	1.66 \pm 0.05 (4)	1.72 \pm 0.11 (21)	1.65 \pm 0.10 (7)	1.68 \pm 0.05 (4)	1.59 \pm 0.01 (3)	1.6 (1)	---	---	---
K	%	---	---	---	---	---	---	---	---	---	---	---	---	---
La	ug/g	---	79 \pm 5 (33)	80	68 - 91	---	80 \pm 5 (26)	75 \pm 6 (3)	77 \pm 5 (3)	---	---	---	---	---
Li	ug/g	---	170 \pm 80 (5)	161	80 - 300	80 (1)	---	174 (2)	---	---	---	---	---	---
Lu	ug/g	---	1.1 \pm 0.3 (15)	1.01	0.78 - 1.7	---	1.11 \pm 0.24 (13)	---	---	---	140 (1)	---	---	---
Mg	%	---	1.5 \pm 0.3 (35)	1.5	1.01 - 2.1	1.29 \pm 0.14 (3)	1.72 \pm 0.25 (14)	1.26 \pm 0.11 (7)	---	1.48 \pm 0.03 (4)	1.6 \pm 0.2 (3)	---	---	---
Mn	ug/g	493 \pm 7	494 \pm 20 (59)	493	440 - 540	492 \pm 24 (11)	491 \pm 18 (22)	488 \pm 19 (7)	508 \pm 17 (7)	493 \pm 2 (4)	485 \pm 22 (3)	---	---	---
Mo	ug/g	---	28 \pm 5 (15)	28	20 - 37	36 (1)	27 \pm 6 (5)	29 (2)	26.5 (2)	---	37 (1)	---	---	---
N	ug/g	---	< 1000	---	---	---	---	---	---	---	---	---	---	---
NH4	ug/g	---	< 100	---	---	---	---	---	---	---	---	---	---	---
NO2	ug/g	---	< 100	---	---	---	---	---	---	---	---	---	---	---
NO3	ug/g	---	< 100	---	---	---	---	---	---	---	---	---	---	---

TABLE 1633-1: COMPILED DATA FOR NBS SPM 1633 TRACE ELEMENTS IN COAL FLY ASH (revised 3/1/86)

ELE	UNITS	NBS	CONSENSUS	MEDIAN	RANGE	AA		MAA		JPES		XRF		PAA		OES		OTHER METHODS	
		Mean \pm SD	Mean \pm SD	Mean \pm SD	Mean \pm SD	Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n) Method
Na	ug/g	---	3130 \pm 200 (41)	3200	2658 - 3600	3170 \pm 120 (4)	(4)	3080 \pm 240 (21)	(21)	3100 \pm 140 (7)	(7)	---	(2)	3600 \pm 300 (4)	(4)	2950	(2)	3240 (2) 14AAA	(2) TCGS
Na	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	3200 (1) SSMS	---
Na	ug/g	---	29 \pm 20 (4)	26	7 - 56	---	---	---	---	---	---	27 (2)	---	---	---	---	---	56 (1) SSMS	---
Nb	ug/g	---	64 \pm 6 (14)	62	57.8 - 81	---	---	63 \pm 4 (10)	(10)	94 (1)	(1)	---	---	---	---	---	---	75 (2) SSMS	62.0 (2) TCGS
Ni	ug/g	98 \pm 3	98 \pm 6 (45)	98.5	84 - 110	96 \pm 9 (8)	(8)	97 \pm 14 (11)	(11)	101 \pm 14 (6)	(6)	98 \pm 6 (6)	(6)	96 \pm 3 (7)	(7)	120 (2)	(2)	106 (2) 14AAA	99 (1) AF
Ni	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	96.47 \pm 0.12 (3)	102 (2) SSMS
Ni	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	47.02 (1) 14AAA	---
O	%	---	47.02 (1)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	< 400	---
Os	ug/g	---	< 400	---	---	---	---	< 4000	---	---	---	---	---	---	---	---	---	1900 (1) COLOR	1300 (1) SSMS
P	ug/g	---	1010 \pm 180 (8)	1040	750 - 1300	880 (1)	(1)	---	---	940 \pm 130 (5)	(5)	---	---	---	---	---	---	67 (1) POL	78.0 (2) IDMS
Pb	ug/g	70 \pm 4	72 \pm 6 (39)	71	62 - 82	74 \pm 7 (13)	(13)	71 (1)	(1)	69 \pm 13 (6)	(6)	67 \pm 3 (4)	(4)	70 \pm 3 (6)	(6)	74.5 (2)	(2)	76 (1) AE-AF	69 (2) SSMS
Pb	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	68.8 (1) POT	---
Pb	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	3.37 (1) NH	---
Pd	ug/g	---	3.37 (1)	---	---	---	---	< 2	---	---	---	< 4000	---	---	---	---	---	---	---
Pr	ug/g	---	31 \pm 8 (3)	28	24 - 40	---	---	---	---	24 (1)	(1)	---	---	---	---	---	---	34 (2) SSMS	---
Pt	ug/g	---	0.74 \pm 0.55 (3)	0.451	0.4 - 1.38	---	---	0.92 (2)	(2)	---	---	---	---	---	---	---	---	---	---
Pt	ug/g	---	115 \pm 8 (30)	115	96 - 130	---	---	116 \pm 8 (19)	(19)	---	---	115 \pm 7 (5)	(5)	109 \pm 16 (4)	(4)	110 (1)	(1)	120 (1) SSMS	120 (2) 14AAA
Re	ug/g	---	< 200	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Rh	ug/g	---	< 0.5	---	---	---	---	---	---	---	---	< 4	---	---	---	---	---	< 0.5	---
Ru	ug/g	---	1.6 (2)	---	0.26 - 3	---	---	0.26 (1)	(1)	---	---	3 (1)	---	---	---	---	---	---	---
S	ug/g	---	4500 \pm 500 (5)	4400	3900 - 5000	---	---	---	---	---	---	---	---	---	---	---	---	4100 \pm 260 (3)	5010 (2) NH
SO ₄	%	---	0.98 (1)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Sb	ug/g	---	6.8 \pm 0.7 (37)	6.9	5 - 8.4	6.63 (2)	(2)	6.8 \pm 0.6 (25)	(25)	6.7 (2)	(2)	---	---	7.07 \pm 0.06 (5)	(5)	---	---	6.9 (1) SSMS	8.3 (1) 14AAA
Sc	ug/g	---	26 \pm 3 (31)	26.9	20 - 32	---	---	27.0 \pm 1.5 (22)	(22)	22 (2)	(2)	---	---	23.8 (2)	(2)	23 (1)	(1)	35 (2) 14AAA	---
Se	ug/g	9.4 \pm 0.5	9.6 \pm 0.6 (44)	9.5	8.7 - 11	9.48 (2)	(2)	9.7 \pm 0.7 (25)	(25)	9.1 (2)	(2)	9.6 \pm 1.2 (3)	(3)	9.76 \pm 0.26 (5)	(5)	---	---	9.7 (2) SSMS	9.35 (2) GOKES
Se	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	9.35 (1) DCPEs	4.5 (1) ASV
Se	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	9.7 (1) COLOR	---
Si	%	---	22.0 \pm 1.0 (17)	22	20 - 23.5	22.3 (2)	(2)	23.5 (1)	(1)	21.8 \pm 1.2 (3)	(3)	22.1 \pm 0.8 (3)	(3)	20.5 (2)	(2)	---	---	22.7 \pm 1.6 (3)	22.7 \pm 0.3 (3) 14AAA
Sm	ug/g	---	12.9 \pm 1.5 (27)	12.9	10.05 - 17	---	---	12.7 \pm 1.1 (22)	(22)	15.8 (1)	(1)	---	---	---	---	---	---	12.6 (2) TCGS	18.5 (2) SSMS
Sn	ug/g	---	8.1 \pm 3.8 (10)	6.7	2.8 - 12.7	12.7 (1)	(1)	10.2 (1)	(1)	---	---	5.85 (2)	(2)	12.2 (2)	(2)	10 (1)	(1)	2.8 (1) SSMS	5.7 (1) NH
Sr	ug/g	1380	1380 \pm 100 (42)	1380	1200 - 1620	1340 (1)	(1)	1420 \pm 120 (23)	(23)	1390 \pm 140 (5)	(5)	1340 \pm 70 (5)	(5)	1310 \pm 70 (4)	(4)	---	---	1340 \pm 60 (3)	1400 (1) SSMS
Ta	ug/g	---	1.90 \pm 0.14 (21)	1.9	1.6 - 2.2	---	---	1.90 \pm 0.15 (20)	(20)	---	---	---	---	---	---	---	---	---	---
Tb	ug/g	---	2.0 \pm 0.5 (20)	1.99	1.2 - 3.12	---	---	1.9 \pm 0.3 (17)	(17)	---	---	---	---	---	---	---	---	---	---
Te	ug/g	---	1.8 \pm 0.8 (3)	2.3	0.92 - 9.9	0.92 (1)	(1)	9.9 (1)	(1)	---	---	---	---	2.31 (2)	(2)	---	---	2.6 (2) SSMS	---
Th	ug/g	24	24.5 \pm 1.8 (25)	24.4	20 - 28	---	---	24.6 \pm 1.2 (20)	(20)	---	---	21 (1)	(1)	---	---	---	---	26.2 (2) GAMMA	28 (1) SSMS
Th-232	pc/g	---	2.23 (1)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2.23 (1) NH	---
Th-230	pc/g	---	3.74 (1)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	3.74 (1) NH	---
Th-232	pc/g	---	2.45 (1)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2.45 (1) NH	---
Ti	ug/g	---	7100 \pm 500 (45)	7230	6000 - 8200	7600 \pm 1000 (3)	(3)	7000 \pm 600 (18)	(18)	7100 \pm 600 (8)	(8)	7700 \pm 500 (5)	(5)	7420 \pm 220 (5)	(5)	6650 (2)	(2)	7120 \pm 140 (3)	7450 (2) 14AAA
Ti	ug/g	---	---	---	---	5 (1)	(1)	---	---	---	---	---	---	3.63 \pm 0.13 (5)	(5)	---	---	5.3 (1) POT	3.8 (1) SSMS
Tl	ug/g	4	4.0 \pm 0.7 (8)	3.7	3.5 - 5.3	---	---	1.36 \pm 0.06 (3)	(3)	---	---	---	---	---	---	---	---	1.3 (1) SSMS	---
Tm	ug/g	---	1.35 \pm 0.06 (4)	1.3	1.3 - 1.43	---	---	11.8 \pm 0.9 (18)	(18)	---	---	9 (1)	(1)	11.8 \pm 0.5 (5)	(5)	---	---	13 (1) SSMS	11.75 (2) IDMS
U	ug/g	11.6 \pm 0.2	11.8 \pm 1.0 (29)	11.8	9 - 13.8	---	---	---	---	---	---	---	---	---	---	---	---	8.6 (1) FLUOR	12 (2) GAMMA
U	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	4.07 (1) NH	---
U-234	pc/g	---	4.07 (1)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.1790 (1) NH	---
U-235	pc/g	---	0.18 (1)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	4.01 (1) NH	---
U-238	pc/g	---	4.01 (1)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
V	ug/g	214 \pm 8	224 \pm 24 (44)	223	174 - 295	260 \pm 100 (4)	(4)	228 \pm 15 (20)	(20)	225 \pm 8 (7)	(7)	210 \pm 50 (5)	(5)	209 (2)	(2)	220 (2)	(2)	190 (1) TCGS	240 (2) SSMS
W	ug/g	---	4.8 \pm 0.6 (16)	4.6	3.8 - 6	---	---	4.8 \pm 0.7 (14)	(14)	---	---	---	---	---	---	---	---	4.6 (1) SSMS	---
Y	ug/g	---	64 \pm 4 (11)	62	56 - 68	---	---	---	---	63.5 (2)	(2)	65 \pm 4 (3)	(3)	64 \pm 3 (4)	(4)	44 (1)	(1)	62 (2) SSMS	---
Yb	ug/g	---	6.5 \pm 1.1 (24)	6.2	4.7 - 8.9	---	---	6.3 \pm 1.0 (19)	(19)	6.55 (2)	(2)	---	---	---	---	5.7 (1)	(1)	8.5 (2) SSMS	---
Zn	ug/g	210 \pm 20	211 \pm 11 (63)	212	180.7 - 250	213 \pm 9 (13)	(13)	209 \pm 10 (19)	(19)	212 \pm 11 (10)	(10)	207 \pm 7 (7)	(7)	212 \pm 6 (6)	(6)	210 (2)	(2)	201 (1) AE-AF	214 (1) AF
Zn	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	250 \pm 40 (3)	---
Zr	ug/g	---	300 \pm 60 (23)	301	160 - 410	---	---	330 \pm 90 (9)	(9)	256 (2)	(2)	302 \pm 11 (3)	(3)	300 \pm 2 (5)	(5)	160 (1)	(1)	400 (1) SSMS	395 (2) 14AAA

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ag (ng/g)</u>					<u>Al (%) cont.</u>				
<	100	L	ITNA	77CHA 01	12.99	0.47		ICPES	81CHU 01
<	100	D	ITNA	78RYA 01	13	0.2		TCGS	79AND 01
<	300	L	ICPES	81CHU 01	13	2.6		OES	76WEW 01
<	400	D	PAA	77CHA 01	13.6	0.5		14NAA	81WIL 01
<	400	L	PAA	76CHA 01	14			OES	78SUG 01
<	500	L	UU	80HEN 01	14	1		AA	80STO 02
<	600	L	IENA	80GLA 03	14.1	2.8		ITNA	81WAN 01
<	1000	L	OES	76WEW 01	14.3	1.1		ITNA	78NAD 02
258	20		RTNA	77NAD 02	14.3	1.1		ITNA	75NAD 02
300			SSMS	83WEI 02					
350			AA	76WEW 01					
1320	130		PAA	74CHA 01					
<u>Al (%)</u>					<u>As (ug/g)</u>				
10.4	0.6		ITNA	78MAC 01	46			ITNA	78KEL 02
10.96	0.402		ITNA	73SHE 01	49	5		ITNA	76KUC 01
11.1	0.6		ICPES	85HAR 01	50		6	SSMS	78GUI 01
11.6			ICPES	80NAD 01	54			ITNA	75KLE 01
11.7	2		XRF	79SMI 01	54	1		IENA	78WAN 01
11.8	0.8		ITNA	76BLO 01	54	3		ITNA	78MAC 01
11.9			ICPES	84CLE 01	55			FAA	78GUI 01
12	1		ITNA	76OND 01	55	10		ICPES	81CHU 01
12.1	0.5		ITNA	76RAG 01	55.8	1.4	H	AE+AF	77FEL 01
12.2	0.3		ITNA	77MAE 01	56			ICPES	80FLO 01
12.2	0.5		14NAA	81WIL 02	56	1	H	FAE	79FEL 01
12.3		35	TCGS	78GLA 04	56.6	3.6		ITNA	81WAN 01
12.3	0.5		ITNA	76WEW 01	57			ICPES	82NYG 01
12.3	0.6	D	ITNA	78RYA 01	57	3	35	NAA	81GLA 03
12.3	0.6		ITNA	77CHA 01	57	4		ITNA	75OND 01
12.35	0.25		ITNA	76STE 05	58		13	ICPES	84BOT 01
12.35	0.25		ITNA	77ROW 03	58	1		ITNA	76BLO 01
12.4	0.3	D	NAA	79STE 01	58	1	35	RTNA	78GLA 02
12.4	0.7	35	ITNA	81GLA 03	58	2		IENA	76STE 05
12.5			ITNA	75KLE 01	58	4	D	NAA	74OND 01
12.5	0.3		ICPES	80NAD 01	58	4		FAA	78HAY 01
12.6	0.1	35	ITNA	81GLA 02	58.1	1.6		RTNA	81GAL 01
12.6	0.2		ICPES	84BOT 01	58.1	1.6	D	RTNA	81GAL 02
12.6	0.2		TCGS	79FAI 01	59			ITNA	78WEA 01
12.6	0.2	D	TCGS	80AND 01	59	2	35	VV	81GLA 04
12.6	0.4		ITNA	73ABE 01	59	3.5		HAA	77SMI 01
12.6	0.7		AA	76OND 01	59	4		ITNA	77CHA 01
12.7			UU	80HEN 01	59	4	D	ITNA	78RYA 01
12.7			OES	80WAL 01	59.1	4.8		IENA	77ROW 04
12.7			ITNA	78WEA 01	59.8	2		IENA	77ROW 03
12.7			AA	79SIL 01	60			UU	80HEN 01
12.7	0.05		FAA	77PIL 01	60	2.6	D	PAA	77CHA 01
12.7	0.5		ITNA	75OND 01	60	2.6		PAA	76CHA 01
12.7	0.5		ICPES	84NAD 01	60	2.6		NAA	77JER 01
12.8			ICPES	80FLO 01	60	3		GCMES	75TAL 01
12.8	0.3		ITNA	78LAU 02	60.4	0.8	35	IENA	80GLA 03
					60.7	2.6		PAA	74CHA 01
					61			SSMS	83WEI 02
					61	3		RTNA	74ORV 01

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>As (ug/g) cont.</u>					<u>B (ug/g)</u>				
61	4		ITNA	76OND 01	100			UU	80HEN 01
61	5		ITNA	73ABE 01	320			COLOR	79DAL 01
61	6		ITNA	84SIL 01	340			OES	79DAL 01
61.2			FAA	75POL 01	407			ICPES	80NAD 01
61.5	2.4	D	NAA	79STE 01	433	4	D	TCGS	80AND 01
61.5	2.4		ITNA	77ROW 04	433	4		TCGS	79FAI 01
61.5	3		PAA	75OND 01	443	5		TCGS	79AND 01
62			XRF	78CAM 02	450	20		ICPES	82OWE 01
63	4	6	PAA	82SEG 01	490	14	6	TCGS	76GLA 01
63	4		PAA	80SEG 01	492	13	6	TCGS	76GLA 01
63	4		FAE	80DSI 01	497	14	6	TCGS	76GLA 01
63	4		ITNA	85FIL 01	500	29		OES	76WEW 01
63	4	6	PAA	82SEG 01	600			SSMS	83WEI 02
63	7		EXRF	77GIA 01					
63.7	3.6		HAA	82NAD 01	<u>Ba (ug/g)</u>				
64			FAA	84SIL 01					
64	1		PAA	76KAT 03	1800			XRF	76WEW 01
64	2		ITNA	78LAU 02	2100	100		14NAA	81WIL 01
64	4		ITNA	76RAG 01	2100	200		ICPES	84NAD 01
65	1		PAA	76KAT 02	2300	100		AA	76OND 01
66	1		XRF	79SMI 01	2370			ICPES	80NAD 01
66.3	10.1		FAA	82BEN 01	2490			ITNA	75MIL 01
67.6	0.6		ITNA	75NAD 02	2500			UU	80HEN 01
68	6		ITNA	78NAD 02	2500	250		ITNA	81WAN 01
68	12		14NAA	81WIL 02	2500	300		ITNA	76WEW 01
68	12		14NAA	81WIL 01	2510	50		IENA	77ROW 04
68	15		ITNA	76WEW 01	2510	160		ITNA	76RAG 01
69.5	7.6		ITNA	73SHE 01	2510	200		ITNA	76OND 01
72		6	SSMS	78GUI 01	2520			AA	79SIL 01
74		13	ICPES	84BOT 01	2540			ICPES	84CLE 01
<u>Au (ng/g)</u>					2540			XRF	78CAM 02
					2540	50		IENA	77ROW 03
					2540	50	D	NAA	79STE 01
<	300	L	ICPES	81CHU 01	2540	51		IENA	76STE 05
<	500	L	UU	80HEN 01	2550	30		ITNA	77ROW 04
2.75	0.2		RTNA	77NAD 02	2550	30	D	NAA	79STE 01
4.84	0.13		RTNA	77NAD 01	2550	110		14NAA	81WIL 02
8	2	D	ITNA	78RYA 01	2580	170		ITNA	76STE 05
8	2		ITNA	77CHA 01	2600	160	D	PAA	77CHA 01
1700			ITNA	78WEA 01	2600	160		PAA	76CHA 01
					2600	170	5	IENA	80GLA 03
					2600	300		ITNA	78LAU 02
					2610	210		PAA	74CHA 01
					2630	20		XRF	79SMI 01
					2660	150		ITNA	84GLA 02
					2670	85		EXRF	77GIA 01
					2700			ITNA	78WEA 01
					2700	200		ITNA	78NAD 02
					2700	200		ITNA	75OND 01
					2700	200		ITNA	75NAD 02
					2710	190	D	ITNA	78RYA 01

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ba (ug/g) cont.</u>					<u>Bi (ug/g)</u>				
2710	190		ITNA	77CHA 01	<	1	L	PAA	76CHA 01
2720	80	5	IENA	80GLA 03	<	1	D	PAA	77CHA 01
2734	167		ITNA	73SHE 01	<	10	L	OES	76WEW 01
2750	140	5	IENA	80GLA 03	0.7			UU	80HEN 01
2780			ITNA	75KLE 01	1.08			PAA	74CHA 01
2800			ICPES	80FLO 01	4.5			SSMS	83WEI 02
2800	60		ITNA	85FIL 01					
2800	100	35	ITNA	81GLA 03	<u>Br (ug/g)</u>				
2800	100	9	ITNA	78LAU 02					
2800	200		ICPES	85HAR 01	5.8	0.8	35	IENA	79GLA 02
2800	200	35	ITNA	81GLA 02	6			ITNA	75KLE 01
2840	180	35	NAA	81GLA 04	6	1		ITNA	78MAC 01
2860	70		ICPES	84BOT 01	6	2		EXRF	77GIA 01
2880	100		ITNA	77MAE 01	6.4	0.2	35	ITNA	81GLA 03
2900	120		FAA	76OWE 01	6.5	0.2	5	IENA	80GLA 03
2900	200	5	IENA	80GLA 03	6.7	0.6		ITNA	76RAG 01
3000			SSMS	83WEI 02	6.9	0.3	35	NAA	81GLA 04
3000	600		OES	76WEW 01	7	1		ITNA	78LAU 02
3200	400		ITNA	78MAC 01	7.5	0.5		ITNA	78NAD 02
3400	400		ITNA	73ABE 01	7.52	0.46		ITNA	75NAD 02
					7.7	1.5		IENA	76STE 05
					8.4	1.5		IENA	77ROW 03
					9.2	0.6		ITNA	77ROW 04
					9.2	0.6	D	NAA	79STE 01
					9.2	0.8		IENA	77ROW 04
					9.5			XRF	78CAM 02
					10			UU	80HEN 01
					11.2	3.5	D	ITNA	78RYA 01
					11.2	3.5		ITNA	77CHA 01
					12			ITNA	78WEA 01
					12	4		ITNA	75OND 01
					12	4		ITNA	73ABE 01
					12.1	1.5		ITNA	73SHE 01
					<u>C (%)</u>				
					3.05	0.05		CB	79SIL 01
					3.3			UU	80HEN 01
					3.45	0.02		GRAV	79SIL 01
					<u>Ca (%)</u>				
					1.15	0.02		AA	82HAR 01
					3.5			XRF	76WEW 01
					3.8		35	TCGS	78GLA 04
					3.92	0.28		PAA	74CHA 01
					4.1	0.36		ITNA	73SHE 01
					4.2			UU	80HEN 01
					4.2	0.2		ITNA	76RAG 01
					4.21	0.09		ITNA	75NAD 02
					4.21	0.09		ITNA	78NAD 02
<u>Be (ug/g)</u>									
5			UU	80HEN 01					
9.56			FAA	75POL 01					
10.1		6	FAA	79GEL 01					
10.9			ICPES	80NAD 01					
11			ICPES	80FLO 01					
11			OES	78SUG 01					
11.9	0.3		ICPES	84BOT 01					
12			AA	79SIL 01					
12			AA	76WEW 01					
12	0.8		FAA	75OWE 01					
12	1	35	FAA	76GLA 02					
12.1		6	FAA	79GEL 01					
12.3	0.3		FAA	76OWE 01					
12.4	0.31		AA	74RAI 01					
12.6		6	FAA	79GEL 01					
12.6	0.25		ICPES	81CHU 01					
12.6	0.5		AA	76OND 01					
13.2		6	FAA	79GEL 01					
13.5		6	FAA	79GEL 01					
14	0.95		OES	76WEW 01					
15			ICPES	84CLE 01					
18.7	0.5		ICPES	84NAD 01					

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ca (%) cont.</u>					<u>Cd (ug/g)</u>				
4.3			AA	79SIL 01	0.93			POT	82CHR 01
4.3	0.2		AA	76OND 01	1			ITNA	76WEW 01
4.3	0.3	35	ITNA	81GLA 02	1.2	0.04	7	AA	73TAL 01
4.34			ITNA	75KLE 01	1.2	0.04		FAA	74TAL 01
4.4	0.18		14NAA	81WIL 02	1.2	0.1	6	PAA	82SEG 01
4.4	0.4	D	PAA	77CHA 01	1.2	0.2	6	PAA	82SEG 01
4.4	0.4		ITNA	75OND 01	1.2	0.2		PAA	80SEG 01
4.4	0.4		PAA	76CHA 01	1.3	0.25		FAA	76OWE 01
4.5			ICPES	80FLO 01	1.38	0.14		FAA	79GOD 01
4.5	0.05		ICPES	85HAR 01	1.4	0.16		TCGS	79AND 01
4.5	0.5	D	ITNA	78RYA 01	1.43			FAA	78GUI 01
4.5	0.5		ITNA	77CHA 01	1.43	0.04		RTNA	74ORV 01
4.5	0.6	35	1ENA	80GLA 03	1.43	0.07	D	RTNA	81GAL 02
4.54	0.06		ICPES	84BOT 01	1.43	0.07		RTNA	81GAL 01
4.6			EXRF	78WEG 01	1.45			FAA	75POL 01
4.6	0.5		ITNA	78LAU 02	1.45	0.04		AA	75EPS 01
4.62	0.06		ICPES	80NAD 01	1.45	0.06		RTNA	84DEL 01
4.62	0.15		EXRF	78PEL 01	1.46			AE+AF	77FEL 01
4.65	0.15		ICPES	81CHU 01	1.46	0.05		AA	74RAI 01
4.69	0.14	D	NAA	79STE 01	1.5			POL	74MAI 01
4.69	0.14		ITNA	77ROW 03	1.5	0.07		TCGS	79FAI 01
4.69	0.14		ITNA	76STE 05	1.5	0.07	D	TCGS	80AND 01
4.7			OES	80WAL 01	1.5	0.09	7	AA	73TAL 01
4.7	0.3		ITNA	77MAE 01	1.5	0.09		FAA	74TAL 01
4.73	0.42		ITNA	81WAN 01	1.5	0.1		NAA	77JER 01
4.75	0.08	D	TCGS	80AND 01	1.5	0.1	D	PAA	77CHA 01
4.75	0.08		TCGS	79FAI 01	1.5	0.1		PAA	76CHA 01
4.8			ICPES	80NAD 01	1.5	0.15		FAA	74RAI 01
4.8	0.96		OES	76WEW 01	1.5	0.5		ICPES	81CHU 01
4.81			ICPES	84CLE 01	1.52	0.07		PAA	74CHA 01
4.9	0.2		AA	80STO 02	1.52	0.08		AF	75EPS 01
4.9	0.2		TCGS	79AND 01	1.53			AA	76WEW 01
5	1.1		ITNA	76OND 01	1.55			FAA	79SIL 01
5.04			XRF	78CAM 02	1.6	0.15	7	AE+AF	73TAL 01
5.09	0.56		14NAA	77VAN 01	1.6	0.15		FAE	74TAL 01
5.1	0.03		PAA	76KAT 02	1.6	0.2	6	TCGS	76GLA 01
5.1	0.05		PAA	76KAT 03	1.6	0.5		ICPES	80EPS 03
5.1	0.6		ITNA	76WEW 01	1.63	0.07	8	SSMS	80KOP 01
5.11	0.13		XRF	79SMI 01	1.69			AA	78GEL 01
5.21	0.2		ICPES	84NAD 01	1.7	0.2		AA	76OND 01
5.3	0.1		EXRF	77NIE 01	1.85			IDMS	75KLE 01
5.3	0.5		PAA	75OND 01	2.2	0.6	13	ICPES	84BOT 01
					9.5		13	ICPES	84BOT 01
					15			UU	80HEN 01

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ce (ug/g)</u>					<u>Cl (ug/g)</u>				
125			UU	80HEN 01	19.6	0.1		PAA	74CHA 01
129	10		ITNA	73SHE 01	20	2		ITNA	78NAD 02
136	5		14NAA	81WIL 01	20	2		ITNA	75NAD 02
136	8		14NAA	81WIL 02	25	7		PAA	76CHA 01
140			ICPES	80FLO 01	25	7	D	PAA	77CHA 01
140	10	D	ITNA	78RYA 01	32	10		ITNA	77CHA 01
140	10		ITNA	77CHA 01	32	10	D	ITNA	78RYA 01
141	7		ITNA	81WAN 01	40	8		ITNA	78MAC 01
145	5		ITNA	78LAU 02	40.6	14.4		ITNA	83LI 01
145	6		ITNA	76WEW 01	42			SSMS	83WEI 02
146			ITNA	82GLA 02	42			ITNA	78WEA 01
146	15		ITNA	75OND 01	42	10		ITNA	75OND 01
146	17		ITNA	76OND 01	50			UU	80HEN 01
148	6		ITNA	76RAG 01	52	15		ITNA	81WAN 01
148	7	35	ITNA	81GLA 02	56		35	ITNA	81GLA 03
149	4		XRF	79SMI 01	58	9		ITNA	77MAE 01
149	7	35	NAA	81GLA 04	185	44		ITNA	73SHE 01
149.6	2		ITNA	77ROW 03	<u>Co (ug/g)</u>				
149.6	2	D	ITNA	77ROW 04	25	3		ICPES	84NAD 01
150	2	D	NAA	79STE 01	26			ICPES	80NAD 01
150.6	3.3		IENA	77ROW 04	32	1		ICPES	84BOT 01
152	10	D	PAA	77CHA 01	32	2		AA	77MIT 01
152	10		PAA	76CHA 01	35	2		ITNA	76KUC 01
152	15		ITNA	85FIL 01	35.4	2.8		PAA	74CHA 01
153	1		PAA	76KAT 02	36.2	1.1		ITNA	76BLO 01
153	2		PAA	76KAT 03	36.7	3.9		ITNA	75NAD 02
153	3	35	ITNA	81GLA 03	37	4		ITNA	78NAD 02
153	4		ITNA	84ODD 01	38			ITNA	78WEA 01
153	6		RTNA	84ODD 01	38			SSMS	83WEI 02
154			XRF	78CAM 02	38	0.96		OES	76WEW 01
154	8	35	IENA	80GLA 03	38	1		ITNA	85FIL 01
157	3.2		ICPES	81CHU 01	38	2	35	IENA	80GLA 03
160	23		EXRF	77GIA 01	38	2		ITNA	78MAC 01
161	35		ITNA	78NAD 02	38	2		ITNA	73SHE 01
161	35		ITNA	75NAD 02	38.6	3.7		ITNA	76WEW 01
169			ITNA	75MIL 01	39			AA	76WEW 01
176	4		ITNA	78MAC 01	39	2		ICPES	85HAR 01
200	100		OES	76WEW 01	39.4	1.2		ITNA	76RAG 01
210			SSMS	83WEI 02	39.8	0.9		ITNA	81WAN 01
210	34		SSMS	78SUG 02	40	2	35	NAA	81GLA 04
					40	2		PAA	76CHA 01
					40	2		ITNA	76OND 01
					40	2		ITNA	73ABE 01
					40	2	D	PAA	77CHA 01
					40	4		FAA	76OME 01
					40.1	0.6		ITNA	84GLA 02
					40.3	0.4		ITNA	77ROW 03
					40.3	0.4	D	NAA	79STE 01
					40.3	0.4	D	ITNA	77ROW 04
					41			ICPES	80FLO 01

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Co (ug/g) cont.</u>					<u>Cr (ug/g) cont.</u>				
41	0.6		IENA	77ROW 04	128	5	35	ITNA	81GLA 02
41	1		ITNA	78LAU 02	128	5	35	ITNA	81GLA 04
41	1	35	ITNA	81GLA 02	128.5	8.5		AA	77MIT 01
41	1.2		ICPES	81CHU 01	129	3	D	NAA	79STE 01
41	2	35	ITNA	81GLA 03	129	3.9		ICPES	81CHU 01
41	3		ITNA	76WEW 01	129.2	2.7		ITNA	77ROW 03
41.5	1.2		ITNA	75OND 01	129.2	2.7	D	ITNA	77ROW 04
42			FAA	79SIL 01	130			AA	76WEW 01
42			ITNA	75MIL 01	130			SSMS	83WEI 02
42	1.6		ITNA	77CHA 01	130			UU	80HEN 01
42	1.6	D	ITNA	78RYA 01	130	4		ITNA	84GLA 02
42	3		PAA	76KAT 02	130	5	9	ITNA	78LAU 02
42	5		PAA	76KAT 03	131			EXRF	78WEG 01
42	6		AA	76OND 01	131	6		PAA	76CHA 01
45	16		14NAA	81WIL 01	131	6	D	PAA	77CHA 01
45	16		14NAA	81WIL 02	131	6.1		PAA	74CHA 01
46			ITNA	75KLE 01	131	8		ITNA	73ABE 01
46	10		AA	82HAR 01	131	8		EXRF	78PEL 01
48			ITNA	84CLE 01	131	9		ITNA	76KUC 01
50			UU	80HEN 01	131.7	4.6		RTNA	81GAL 01
54			ICPES	84CLE 01	131.7	4.6	D	RTNA	81GAL 02
					132	3.3		AA	74RAI 01
					132	10		FAA	76OWE 01
					132.3	0.35		RTNA	74MCC 01
					134	9	35	ITNA	81GLA 03
					135			ITNA	84CLE 01
					135			AA	78GUI 01
					135			AA	78WEG 01
					135	6	D	ITNA	78RYA 01
					135	6		ITNA	77CHA 01
	1.5		ITNA	75NAD 02	135	14		IENA	77ROW 04
	2		ITNA	78NAD 02	137	16		ITNA	81WAN 01
			ICPES	80NAD 01	138			ITNA	75KLE 01
		6	SSMS	78GUI 01	140	15		ITNA	78LAU 02
	7		ITNA	76RAG 01	142	9		PAA	76KAT 02
	6		ITNA	76OND 01	142	13		PAA	76KAT 03
	8		ITNA	76WEW 01	150	13		OES	76WEW 01
			OES	78SUG 01	159	115		EXRF	77GIA 01
	4		AA	76OND 01	175		6	SSMS	78GUI 01
	5		ITNA	78MAC 01	180			ITNA	75MIL 01
	6		ICPES	85HAR 01	181			FAA	75POL 01
	12		ITNA	73SHE 01					
			ICPES	80FLO 01					
	9		ITNA	85FIL 01					
	14		XRF	79SMI 01					
	9		ICPES	84BOT 01					
	11		ITNA	76BLO 01					
	6	D	NAA	74OND 01					
	6		ITNA	75OND 01					
			ITNA	78WEA 01					
			AA	79SIL 01					

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Cs (ug/g)</u>					<u>Cu (ug/g) cont.</u>				
0.63	0.06		PAA	74CHA 01	125	10		ITNA	77CHA 01
5.8	1.4		ITNA	78NAD 02	125	13		EXRF	78PEL 01
5.81	1.4		ITNA	75NAD 02	126	2		AA	82HAR 01
7.3	1		ITNA	78LAU 02	127			AA	78GEL 01
7.7	1.3		ITNA	76WEW 01	128	3.9		ICPES	81CHU 01
8	1		PAA	76CHA 01	128	6		ICPES	84BOT 01
8	1	D	PAA	77CHA 01	129			AA	76WEW 01
8.1	0.5	9	ITNA	78LAU 02	129			AA	78WEG 01
8.2	0.4		ITNA	84GLA 02	129	4		ICPES	85HAR 01
8.2	0.5		ITNA	76OND 01	129	5	8	SSMS	80KOP 01
8.2	0.9		IENA	76STE 05	130	2.2		AA	74RAI 01
8.3	0.4	35	ITNA	81GLA 02	130	5		AA	80STO 02
8.3	0.7		ITNA	85FIL 01	131		6	SSMS	78GUI 01
8.3	0.9		IENA	77ROW 03	131			FAA	78GUI 01
8.3	1	D	ITNA	78RYA 01	131			AE+AF	77FEL 01
8.3	1		ITNA	77CHA 01	132			ICPES	84CLE 01
8.4	0.2	D	NAA	79STE 01	133			XRF	75KLE 01
8.4	0.5		ITNA	77ROW 04	133	4		EXRF	77GIA 01
8.42	0.22		IENA	77ROW 04	134	11	6	PAA	82SEG 01
8.5	0.5		ITNA	78MAC 01	135	3		XRF	79SMI 01
8.6			ITNA	78WEA 01	136			ICPES	80NAD 01
8.6			SSMS	83WEI 02	136	6	35	RTNA	77GLA 01
8.6	0.8		ITNA	76RAG 01	137	7		ITNA	76BLO 01
8.6	1.1		ITNA	75OND 01	140	10		XRF	81COH 02
8.7	0.3	35	IENA	80GLA 03	140	20	6	PAA	82SEG 01
8.7	0.7	35	NAA	81GLA 04	140	20		PAA	80SEG 01
8.8	0.4	35	ITNA	81GLA 03	142	9		ITNA	73SHE 01
8.9	0.8		ITNA	81WAN 01	142	37		ICPES	84NAD 01
9.4			ITNA	75MIL 01	145		6	SSMS	78GUI 01
9.9	0.8		ITNA	73ABE 01	198	61		ITNA	81WAN 01
10			UU	80HEN 01	<u>Dy (ug/g)</u>				
10	1		14NAA	81WIL 02	7.6	2.4		ITNA	73SHE 01
13.8	1.4		ITNA	73SHE 01	9	0.1		RTNA	84ODD 01
<u>Cu (ug/g)</u>					9	2		ITNA	78MAC 01
70.2	1.8		AA	77MIT 01	9.1	0.1		ITNA	84ODD 01
110	11		OES	76WEW 01	9.4	0.5		ITNA	76STE 05
115	8		ITNA	77ROW 03	9.4	0.5		ITNA	77ROW 03
115	8		ITNA	76STE 05	9.4	0.5	D	NAA	79STE 01
115	8	D	NAA	79STE 01	10.2			ITNA	75MIL 01
119	5		AA	76OND 01	10.2		35	ITNA	81GLA 04
120			ICPES	80FLO 01	10.3	0.4	35	ITNA	81GLA 02
120			UU	80HEN 01	10.9			ITNA	78NAD 02
121			AA	79SIL 01	10.9			ITNA	75NAD 02
123			EXRF	78WEG 01	12			SSMS	83WEI 02
124			XRF	78CAM 02	12.1	0.6		ITNA	76OND 01
124			ICPES	84SOB 01	19	3		SSMS	78SUG 02
124	19		FAA	76OWE 01					
125			AA	78GUI 01					
125	10	D	ITNA	78RYA 01					

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Er (ug/g)</u>					<u>Fe (%)</u>				
<	100	L	OES	76WEW 01	4.23	0.3		PAA	76KAT 03
<	300	L	OES	76WEW 01	4.24	0.19		PAA	76KAT 02
2.1			SSMS	83WEI 02	4.4			AA	78GWI 01
11	2		SSMS	78SUG 02	5.278	0.56		ITNA	73SHE 01
89	3		RTNA	84ODD 01	5.53	0.12		ICPES	84NAD 01
<u>Eu (ug/g)</u>					5.6	0.2		ITNA	76WEW 01
					5.6	2.8		OES	76WEW 01
					5.7	0.3		ITNA	76KUC 01
1.9	0.2		ITNA	76OND 01	5.8			OES	78SUG 01
2			ICPES	80FLO 01	5.8			AA	78WEG 01
2	2	35	IENA	80GLA 03	5.8			ITNA	84CLE 01
2.3	0.1		ITNA	73ABE 01	5.8	0.3	5	IENA	80GLA 03
2.39	0.11		ITNA	76RAG 01	5.9	0.2	5	IENA	80GLA 03
2.42	0.16		ITNA	73SHE 01	5.91	0.16		IENA	77ROW 04
2.44	0.19		ITNA	76STE 05	5.93	0.04		ICPES	85HAR 01
2.49	0.15	35	ITNA	81GLA 02	5.94			XRF	78CAM 02
2.5			ITNA	78WEA 01	5.96	0.16		XRF	79SMI 01
2.5	0.16	35	ITNA	81GLA 04	6			XRF	76WEW 01
2.5	0.4		ITNA	75OND 01	6			ICPES	80FLO 01
2.56	0.07		ITNA	84GLA 02	6	0.2		ICPES	80EPS 03
2.57	0.19		ITNA	77ROW 03	6	0.3		ITNA	76OND 01
2.6	0.2		ITNA	76WEW 01	6	0.4		AA	79WEG 01
2.6	0.2		ITNA	85FIL 01	6.03	0.16		ITNA	81WAN 01
2.6	0.2		ITNA	81WAN 01	6.08	0.52		PAA	74CHA 01
2.62	0.05		ITNA	75NAD 02	6.09	0.03		ITNA	84GLA 02
2.62	0.05		ITNA	78NAD 02	6.1	0.1		TCGS	79FAI 01
2.69	0.09		ITNA	77ROW 04	6.1	0.1	D	TCGS	80AND 01
2.69	0.09	D	NAA	79STE 01	6.1	0.2	D	PAA	77CHA 01
2.7	0.1		ITNA	78LAU 02	6.1	0.2		PAA	76CHA 01
2.72	0.07		ITNA	84ODD 01	6.1	0.3	35	NAA	81GLA 04
2.79			ITNA	82GLA 02	6.14	0.07		ICPES	84BOT 01
2.8	0.13		OES	76WEW 01	6.16	0.3		EXRF	78PEL 01
2.8	0.3		RTNA	84ODD 01	6.17	0.41		ITNA	78NAD 02
2.86			ITNA	75KLE 01	6.17	0.41		ITNA	75NAD 02
2.9	0.2	35	ITNA	81GLA 03	6.2			EXRF	78WEG 01
3	0.15		ICPES	81CHU 01	6.2			OES	80WAL 01
3.1			ITNA	75MIL 01	6.2	0.04		ICPES	80NAD 01
5			SSMS	83WEI 02	6.2	0.05		ITNA	77ROW 03
5.3	1.2		SSMS	78SUG 02	6.2	0.05	D	ITNA	77ROW 04
<u>F (ug/g)</u>					6.2	0.05	D	NAA	79STE 01
					6.2	0.1		EXRF	77NIE 01
					6.2	0.1		AA	76OND 01
10			UU	80HEN 01	6.2	0.1		AA	77MIT 01
20			AA	76WEW 01	6.2	0.2		FAF	80EPS 04
20	2		ISE	83BET 02	6.2	0.3	D	NAA	74OND 01
					6.2	0.3		ITNA	75OND 01
					6.2	0.4	D	ITNA	78RYA 01
					6.2	0.4		ITNA	77CHA 01
					6.2	0.6		XRF	81COH 02
					6.22	0.08		TCGS	79AND 01
					6.22	0.48		EXRF	77GIA 01

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Fe (%) cont.</u>					<u>Gd (ug/g)</u>				
6.23	0.1		ITNA	78LAU 02	1.9			SSMS	83WEI 02
6.23	0.14	35	ITNA	81GLA 02	11			ITNA	75MIL 01
6.3	0.1		ITNA	78MAC 01	11.4	0.2		TCGS	79FAI 01
6.3	0.15		AA	82HAR 01	11.6	0.1		RTNA	84ODD 01
6.3	0.4	35	ITNA	81GLA 03	11.7	0.4		TCGS	79AND 01
6.32			ICPES	80NAD 01	11.9	0.2		ITNA	84ODD 01
6.35			ITNA	78WEA 01	12.1	0.36		ICPES	81CHU 01
6.35	0.12		ITNA	85FIL 01	17.5	0.3		TCGS	80AND 01
6.37			ITNA	75KLE 01	23	4		SSMS	78SUG 02
6.4			AA	79SIL 01	<u>Ge (ug/g)</u>				
6.4	0.15		14NAA	81WIL 02	19	1		XRF	79SMI 01
6.46			ICPES	84CLE 01	20			UU	80HEN 01
6.46	0.14		ICPES	81CHU 01	24			UU	78SIM 01
6.5			UU	80HEN 01	25	1.4		OES	76WEW 01
6.51	0.31		ITNA	73ABE 01	25.9	0.7		COLOR	84SHI 01
6.69			ITNA	75MIL 01	26	5		EXRF	77GIA 01
6.7		35	TCGS	78GLA 04	26.8	2.6		ICPES	84NAD 02
6.8	0.03		ITNA	76RAG 01	36			SSMS	83WEI 02
6.8	0.2		AA	80STO 02	131			FAA	75POL 01
6.95	0.15		14NAA	81WIL 01	476	166		ITNA	73SHE 01
7			AA	76WEW 01	<u>H (ug/g)</u>				
<u>Ga (ug/g)</u>					1000			UU	80HEN 01
34.3	1.9		ITNA	81WAN 01	1200	400		TCGS	79AND 01
37	2		IENA	78WAN 01	<u>H2O- (%)</u>				
38.3	6.3		ITNA	73SHE 01	0.03			UU	80HEN 01
40	1		XRF	79SMI 01	<u>H2O-T (%)</u>				
40.3	2	5	IENA	76STE 05	0.17			FD	80KHA 02
40.7	1.2	D	NAA	79STE 01	<u>H2SO4 (ug/g)</u>				
40.7	1.2		IENA	77ROW 03	< 1000		L	UU	80HEN 01
40.7	1.2	5	IENA	76STE 05	<u>Hf (ug/g)</u>				
41	1	35	IENA	81GLA 04	4			SSMS	83WEI 02
41	7		EXRF	77GIA 01	6.5	0.7		ITNA	76WEW 01
43	1	35	IENA	80GLA 03	6.7	0.3		IENA	77ROW 03
43	1	35	IENA	81GLA 03	6.7	0.3	D	IENA	77ROW 04
45	7		ITNA	76OND 01	6.7	0.3	D	NAA	79STE 01
45	8		ITNA	85FIL 01	7	0.4		ITNA	77ROW 04
48	6		COLOR	79LIK 01	7.2	0.6		ITNA	76RAG 01
49			XRF	75KLE 01	7.4	0.5		ITNA	78LAU 02
50			UU	80HEN 01	7.5			ITNA	78NAD 02
58	10		FAA	76OWE 01					
68	14		OES	76WEW 01					
72			ICPES	80FLO 01					

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Hf (ug/g) cont.</u>					<u>Ho (ug/g)</u>				
7.5	0.4		ITNA	78MAC 01	0.82			SSMS	83WEI 02
7.5	0.4		ITNA	85FIL 01	1.94	0.13		IENA	77ROW 03
7.5	0.5		ITNA	77CHA 01	1.94	0.13	D	NAA	79STE 01
7.5	0.5	D	ITNA	78RYA 01	1.94	0.13		IENA	76STE 05
7.52	0.02		ITNA	75NAD 02	1.98	0.01		RTNA	84ODD 01
7.6	0.2		ITNA	84GLA 02	1.99	0.07		ITNA	84ODD 01
7.62	0.56		ITNA	73SHE 01	3.6	0.8		SSMS	78SUG 02
7.7	0.1		ITNA	81WAN 01					
7.9			ITNA	78WEA 01	<u>I (ug/g)</u>				
7.9	0.4		ITNA	75OND 01					
8	0.4	35	ITNA	81GLA 02	<	0.5	L	UU	80HEN 01
8	0.4	35	NAA	81GLA 04	<	6	L	EXRF	77GIA 01
8.1	0.1	35	IENA	80GLA 03	2	1.2		ITNA	77MAE 01
8.2			ITNA	75MIL 01	2.8	1		PAA	77CHA 01
8.2	0.8		ITNA	73ABE 01	2.9			ITNA	78WEA 01
8.2	0.8		ITNA	76OND 01	2.9	1.2		PAA	75OND 01
10			UU	80HEN 01	3	1		ITNA	77CHA 01
10	2	35	ITNA	81GLA 03	3	1	D	ITNA	78RYA 01
10.8			ITNA	75KLE 01	3.4			SSMS	83WEI 02
<u>Hg (ng/g)</u>					<u>In (ng/g)</u>				
100			UU	80HEN 01	118	4	5	IENA	76STE 05
119	2		CVAA	80NAD 01	128	8	5	IENA	76STE 05
120	15		CVAA	82SUL 01	128	8	D	NAA	79STE 01
127	3		CVAA	75KLE 01	128	8		IENA	77ROW 03
130	30		PAA	76CHA 01	156	35		ITNA	73SHE 01
130	30		NAA	77JER 01	160	20		ITNA	81WAN 01
130	30	D	PAA	77CHA 01	270	140		ITNA	76RAG 01
134	4		CVAA	74RAI 01	280	30		PAA	74CHA 01
135	10		PAA	74CHA 01	290	60		PAA	76CHA 01
137	15	D	RTNA	81GAL 02	290	60	D	PAA	77CHA 01
137	15		RTNA	81GAL 01	320	80	D	ITNA	78RYA 01
141	12		FAA	77GLA 03	320	80		ITNA	77CHA 01
145			ITNA	78WEA 01	320	100		ITNA	75OND 01
145	6		RTNA	74ORV 01	3000	2000		EXRF	77GIA 01
145	6		RTNA	84DEL 01	<u>Ir (ng/g)</u>				
160	40		ITNA	77CHA 01					
160	40	D	ITNA	78RYA 01					
170	20	6	PAA	82SEG 01	<	200	L	UU	80HEN 01
200	20		PAA	80SEG 01	15.6	2.4		RTNA	77NAD 02
200	100	6	PAA	82SEG 01	18.6			ITNA	78WEA 01
550			XRF	76WEW 01	18.6	3.3		ITNA	73SHE 01
3700	1100		ITNA	73SHE 01	250	80		ITNA	77CHA 01
11000			XRF	78CAM 02	250	80	D	ITNA	78RYA 01

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>K (%)</u>					<u>K (%) cont.</u>				
1.29	0.09		ITNA	76KUC 01	1.9	0.5		14NAA	81WIL 01
1.51			ICPES	80NAD 01	1.97		35	ITNA	81GLA 04
1.51	0.05		ITNA	78MAC 01	2.18	0.24		ITNA	73SHE 01
1.54	0.04		ITNA	76BLO 01	3.3	0.66		OES	76WEW 01
1.56			ICPES	84CLE 01					
1.58	0.15		ITNA	75OND 01	<u>La (ug/g)</u>				
1.59	0.05		PAA	76KAT 02	45	4.5		OES	76WEW 01
1.59	0.05		PAA	76KAT 03	64	2		ITNA	78NAD 02
1.6			OES	80WAL 01	64.1	1.6		ITNA	75NAD 02
1.6	0.04		ICPES	81CHU 01	68	2		ITNA	78MAC 01
1.6	0.06		PAA	76CHA 01	68	5		ICPES	85HAR 01
1.6	0.06	D	PAA	77CHA 01	70			UU	80HEN 01
1.6	0.12		AA	80STO 02	71.9			ITNA	84GLA 02
1.61			ITNA	78WEA 01	72	6		XRF	79SMI 01
1.63			XRF	78CAM 02	74	4		ITNA	78LAU 02
1.63	0.06		ITNA	77MAE 01	74.8			ITNA	82GLA 02
1.64	0.01		AA	82HAR 01	75	4	35	ITNA	81GLA 03
1.65	0.09		ITNA	78LAU 02	76	14		ITNA	76OND 01
1.66	0.04		XRF	79SMI 01	76.4	4.5		ITNA	81WAN 01
1.67	0.06		EXRF	78PEL 01	77	8		ITNA	73SHE 01
1.67	0.07		ICPES	84BOT 01	78			XRF	78CAM 02
1.68			AA	79SIL 01	78			ICPES	80FLO 01
1.69		35	TCGS	78GLA 04	79	1.6		ICPES	81CHU 01
1.69	0.13	D	ITNA	78RYA 01	79	6	35	IENA	80GLA 03
1.69	0.13		ITNA	77CHA 01	80			ITNA	75MIL 01
1.7			ITNA	78KEL 02	81	2		ITNA	76RAG 01
1.7	0.2		ITNA	76OND 01	81	3	D	NAA	79STE 01
1.71	0.03		GAMMA	75OND 01	81.2	3.2		IENA	76STE 05
1.71	0.03		GAMMA	73ABE 01	81.2	3.3		IENA	77ROW 03
1.71	0.04		AA	76OND 01	82			ITNA	78WEA 01
1.71	0.1		ICPES	84NAD 01	82			ITNA	75KLE 01
1.72	0.09		ICPES	80NAD 01	82	2		ITNA	75OND 01
1.73	0.18		ITNA	81WAN 01	82	4		ITNA	73ABE 01
1.74	0.07		EXRF	77NIE 01	82	20		EXRF	77GIA 01
1.75			UU	80HEN 01	83	0.9		ITNA	85FIL 01
1.75	0.1		TCGS	79AND 01	84	2		RTNA	84ODD 01
1.75	0.18		ITNA	76RAG 01	84	3.6		IENA	77ROW 04
1.76	0.05	D	TCGS	80AND 01	84	3.6		ITNA	77ROW 03
1.76	0.05		TCGS	79FAI 01	85	3		ITNA	84ODD 01
1.76	0.19		ITNA	85FIL 01	85	4	D	ITNA	78RYA 01
1.77			ITNA	75MIL 01	85	4		ITNA	77CHA 01
1.78	0.23		ITNA	75NAD 02	85.3	3.8		ITNA	77ROW 04
1.78	0.24		ITNA	78NAD 02	86	2		ITNA	76WEW 01
1.8			ITNA	75KLE 01	91	7		ITNA	76STE 05
1.8	0.1		ICPES	85HAR 01	110	20		SSMS	78SUG 02
1.8	0.13		ITNA	77ROW 03	120			SSMS	83WEI 02
1.8	0.13	D	NAA	79STE 01					
1.8	0.13		ITNA	76STE 05					
1.8	0.3		14NAA	81WIL 02					
1.81	0.15	35	ITNA	81GLA 03					
1.83	0.05	35	IENA	80GLA 03					

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Li (ug/g)</u>					<u>Mg (%) cont.</u>				
1.7	0.3		ICPES	81CHU 01	1.5	0.15		PAA	76CHA 01
80			AA	76WEW 01	1.5	0.2		TCGS	79FAI 01
140	9		OES	76WEW 01	1.5	0.2	D	TCGS	80AND 01
161	14		ICPES	84BOT 01	1.5	0.3		ITNA	76WEW 01
186			ICPES	84CLE 01	1.5	1.3		14NAA	81WIL 01
300			UU	80HEN 01	1.52	0.06		ITNA	75NAD 02
<u>Lu (ug/g)</u>					1.52	0.06		ITNA	78NAD 02
0.78			SSMS	83WEI 02	1.597	0.806		ITNA	73SHE 01
0.87			ITNA	82GLA 02	1.6	0.32		OES	76WEW 01
0.9	0.3		ITNA	81WAN 01	1.68	0.21		ITNA	77CHA 01
0.94	0.09	D	ITNA	77ROW 04	1.68	0.21	D	ITNA	78RYA 01
0.94	0.09		ITNA	77ROW 03	1.78	0.2		ITNA	76STE 05
0.94	0.09	D	NAA	79STE 01	1.78	0.2	D	ITNA	77ROW 03
1	0.1		ITNA	75OND 01	1.8			NAA	79STE 01
1	0.2		ITNA	76WEW 01	1.8			ICPES	80FLO 01
1.01	0.02		ITNA	78NAD 02	1.8			OES	80WAL 01
1.01	0.02		ITNA	75NAD 02	1.8	0.4		ITNA	78WEA 01
1.1		35	ITNA	81GLA 03	1.8			ITNA	75OND 01
1.1	0.15	D	ITNA	78RYA 01	2			UU	80HEN 01
1.1	0.15		ITNA	77CHA 01	2	0.4		ITNA	76RAG 01
1.11	0.22		ITNA	84GLA 11	2.08	0.43		ITNA	73ABE 01
1.2			ITNA	75MIL 01	2.1	0.5		14NAA	81WIL 02
1.56	0.01		RTNA	84ODD 01	2.19	0.35		ITNA	81WAN 01
1.68	0.06		ITNA	84ODD 01	2.4		35	TCGS	78GLA 04
1.7	0.4		SSMS	78SUG 02	6.3	0.3		ITNA	78MAC 01
2	0.05		ITNA	78LAU 02	<u>Mn (ug/g)</u>				
3.8	0.5		ITNA	73SHE 01	351		6	SSMS	78GUI 01
4	1		ITNA	78MAC 01	388			ICPES	84SOB 01
<u>Mg (%)</u>					420			ITNA	78KEL 02
0.84	0.05		AA	82HAR 01	422.4	3.9		AA	77MIT 01
1.01			ICPES	80NAD 01	440			AA	78WEG 01
1.2	0.1		AA	76OND 01	460			ITNA	75KLE 01
1.22			AA	79SIL 01	460	26		OES	76WEW 01
1.25	0.06		ICPES	85HAR 01	464	1		ITNA	78NAD 02
1.29	0.02		ICPES	80NAD 01	464	1.4		ITNA	75NAD 02
1.29	0.03		ICPES	84BOT 01	464	46		ITNA	76KUC 01
1.3	0.04		ICPES	84NAD 01	465			ICPES	84CLE 01
1.32	0.04		ICPES	81CHU 01	466	31		ITNA	73SHE 01
1.34			ICPES	84CLE 01	470	20		ICPES	85HAR 01
1.4			OES	78SUG 01	477	5		AA	76OND 01
1.4	0.4		ITNA	78LAU 02	478			FAA	78GUI 01
1.4	0.4		ITNA	77MAE 01	480	10		ITNA	76BLO 01
1.44	0.02		PAA	76KAT 03	480	25	D	TCGS	80AND 01
1.45	0.05		AA	80STO 02	480	25		TCGS	79FAI 01
1.48	0.01		PAA	74CHA 01	482			ICPES	80NAD 01
1.5	0.01		PAA	76KAT 02	483	12		ICPES	84NAD 01
1.5	0.15	D	PAA	77CHA 01	483	21		XRF	79SMI 01
					485			AA	79SIL 01
					488	14		ITNA	77ROW 03

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Mn (ug/g) cont.</u>					<u>Mo (ug/g)</u>				
488	14	D	NAA	79STE 01	0.5	0.08	D	PAA	77CHA 01
488	14		ITNA	76STE 05	0.5	0.08		PAA	76CHA 01
488	50		ITNA	81WAN 01	1.52	0.15		PAA	74CHA 01
489	11		ITNA	73ABE 01	20			ITNA	78WEA 01
490			SSMS	83WEI 02	20			UU	80HEN 01
490	14		ICPES	84BOT 01	22.3	1.6		14NAA	81WIL 02
491	10		PAA	76KAT 02	25	5		EXRF	77GIA 01
491	18		PAA	76KAT 03	25.3	1.6	D	NAA	79STE 01
492			AA	78GUI 01	25.3	1.6		IENA	77ROW 03
492	7		AA	82HAR 01	25.3	1.6	D	IENA	77ROW 04
493	4.1		AA	74RAI 01	26			SSMS	83WEI 02
495			ITNA	78WEA 01	26	2		ICPES	84BOT 01
495	15		PAA	76CHA 01	28	1		XRF	79SMI 01
495	15	D	PAA	77CHA 01	28	1	35	IENA	80GLA 03
495	25		PAA	74CHA 01	28	1	35	IENA	81GLA 03
496			OES	80WAL 01	28	1.3		14NAA	81WIL 01
496	19	D	NAA	74OND 01	32			ICPES	80NAD 01
496	19		ITNA	75OND 01	36	3	35	RTNA	78GLA 02
498	11	35	ITNA	81GLA 03	36	5		FAA	76OWE 01
499	22	6	FAA	79GEL 01	37	1.3		OES	76WEW 01
499	25		ITNA	76OND 01					
500			OES	78SUG 01	<u>N (ug/g)</u>				
500			EXRF	78WEG 01					
500			UU	80HEN 01		< 1000	L	UU	80HEN 01
500	15		ITNA	77CHA 01					
500	15	D	ITNA	78RYA 01	<u>Na (ug/g)</u>				
500	17		EXRF	78PEL 01					
503	15		ITNA	77MAE 01	2603	156		ITNA	76KUC 01
504	25		ITNA	76WEW 01	2658	129		ITNA	73SHE 01
505	9	35	ITNA	81GLA 02	2800	300		ITNA	76BLO 01
505	14		ITNA	76RAG 01	2820	50		ITNA	78MAC 01
506			AA	76WEW 01	2830	136		ITNA	76STE 05
508			XRF	78CAM 02	2830	140	D	NAA	79STE 01
510			ICPES	80FLO 01	2830	140		ITNA	77ROW 03
510	10		ITNA	78LAU 02	2900			ICPES	80NAD 01
510	70		XRF	81COH 02	2900			OES	78SUG 01
513	15	35	IENA	80GLA 03	3000			AA	79SIL 01
516	16		ICPES	81CHU 01	3000			OES	80WAL 01
520	6		FAA	76OWE 01	3000			UU	80HEN 01
520	20		ITNA	78MAC 01	3000	70		ICPES	81CHU 01
528		6	SSMS	78GUI 01	3000	100		ITNA	78LAU 02
528	104		EXRF	77GIA 01	3000	200		TCGS	79FAI 01
530	30		AA	80STO 02	3000	200	D	TCGS	80AND 01
531	14		EXRF	77NIE 01	3000	200		ICPES	84NAD 01
540			ITNA	75MIL 01	3052	264		ITNA	81WAN 01
570	24	6	FAA	79GEL 01	3070	80		ITNA	77MAE 01
					3100	200		ICPES	80NAD 01
					3100	300		ITNA	76OND 01
					3130			ITNA	84GLA 02
					3150	110		14NAA	81WIL 01
					3200			SSMS	83WEI 02

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Na (ug/g) cont.</u>					<u>Nd (ug/g) cont.</u>				
3200			ITNA	78WEA 01	69	7		ITNA	77CHA 01
3200	200		AA	76OND 01	69	7	D	ITNA	78RYA 01
3200	200		AA	82HAR 01	81			ITNA	75MIL 01
3200	200		ICPES	84BOT 01	90	13		SSMS	78SUG 02
3200	300	D	ITNA	78RYA 01	94	19		ICPES	81CHU 01
3200	300		ITNA	77CHA 01					
3200	400		ITNA	75OND 01					
3220	50	35	ITNA	81GLA 03	<u>NH₄ (ug/g)</u>				
3230			ICPES	84CLE 01	<	100	L	UU	80HEN 01
3240	100		ITNA	76RAG 01					
3290	110		AA	80STO 02	<u>Ni (ug/g)</u>				
3300	100	35	ITNA	81GLA 02	69	7		IENA	77ROW 03
3300	100		ICPES	85HAR 01	78			AA	76WEW 01
3300	150		PAA	76CHA 01	84	2	35	IENA	81GLA 04
3300	150	D	PAA	77CHA 01	84	6	35	IENA	80GLA 03
3300	200		ITNA	78NAD 02	85			AA	78GUI 01
3300	200		ITNA	75NAD 02	88	2		ICPES	84BOT 01
3330	170		14NAA	81WIL 02	92	6		PAA	75OND 01
3400			ITNA	75MIL 01	92	9	6	PAA	82SEG 01
3400	300		ITNA	76WEW 01	93			EXRF	78WEG 01
3400	300		PAA	74CHA 01	93	5	8	SSMS	80KOP 01
3600		35	TCGS	78GLA 04	94			XRF	78CAM 02
3700	200		ITNA	73ABE 01	94			ICPES	80FLO 01
3850	210		PAA	76KAT 03	95	9	D	ITNA	78RYA 01
3860	130		PAA	76KAT 02	95	9		ITNA	77CHA 01
9700	1900		OES	76WEW 01	95	20		EXRF	78PEL 01
<u>Nb (ug/g)</u>					96	3		PAA	76KAT 02
<	100	L	OES	76WEW 01	96	5		XRF	79SMI 01
7			UU	80HEN 01	96	5		PAA	76KAT 03
26	1		XRF	79SMI 01	96	5		ICPES	85HAR 01
28	2		EXRF	77GIA 01	96.4	1.2	6	IDMS	74MOO 01
56			SSMS	83WEI 02	96.4	1.2	6	IDMS	74MOO 01
					96.6	1	6	IDMS	74MOO 01
<u>Nd (ug/g)</u>					96.8	3.2		PAA	74CHA 01
57.8	1.6	D	ITNA	77ROW 04	97	5		PAA	76CHA 01
57.8	1.6		ITNA	77ROW 03	97	5	D	PAA	77CHA 01
58	2	D	NAA	79STE 01	98			POL	74MAI 01
58	10		ITNA	81WAN 01	98	9	D	FAA	80WAL 01
60		35	IENA	81GLA 04	98.5	9.5		NAA	74OND 01
60			SSMS	83WEI 02	99			IENA	77ROW 04
60	2	35	IENA	80GLA 03	99	4		AA	79SIL 01
60.5	1.5		ITNA	75NAD 02	99	9	D	AF	80EPS 02
61	2		ITNA	78NAD 02	99.7	3.3		NAA	79STE 01
62	2		TCGS	80AND 01	100			AA	77MIT 01
62.1	2.4		TCGS	79FAI 01	100			UU	80HEN 01
66	7		ITNA	76OND 01	100	3		ICPES	84CLE 01
67	2		RTNA	84ODD 01	100	5		ICPES	81CHU 01
69	4		ITNA	84ODD 01	100	5		ITNA	75NAD 02
					100	7	6	ITNA	78NAD 02
								PAA	82SEG 01

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ni (ug/g) cont.</u>					<u>Pb (ug/g)</u>				
100	7		AA	76OND 01	40		6	SSMS	78GUI 01
100	20		ITNA	76OND 01	46		13	ICPES	84BOT 01
101	3.3		AA	74RAI 01	55			FAA	75POL 01
101	7		EXRF	77GIA 01	62			AA	78GUI 01
105	3		14NAA	81WIL 01	62.8			FAA	78GUI 01
105	13		ITNA	75OND 01	64	13		ICPES	81CHU 01
106			FAA	78GUI 01	65			EXRF	78WEG 01
106	12		14NAA	81WIL 02	66	6		XRF	79SMI 01
109			XRF	75KLE 01	66	12		EXRF	78PEL 01
110			SSMS	83WEI 02	67			POL	74MAI 01
110	7		PAA	80SEG 01	68	4		PAA	80SEG 01
110	10	9	ITNA	78LAU 02	68	4	6	PAA	82SEG 01
120			OES	78SUG 01	68	5	13	ICPES	84BOT 01
120	7.5		OES	76WEW 01	68	6	8	SSMS	80KOP 01
121	21		ITNA	85FIL 01	68.8			POT	82CHR 01
128			ICPES	80NAD 01	69	4	6	PAA	82SEG 01
330			ICPES	84SOB 01	70			AA	79SIL 01
<u>NO2 (ug/g)</u>					70			AA	78GEL 01
<	100	L	UU	80HEN 01	70		6	SSMS	78GUI 01
<u>NO3 (ug/g)</u>					70.5			FAA	78SIE 01
<	100	L	UU	80HEN 01	70.7	2.6		PAA	74CHA 01
<u>O (%)</u>					71	3		NAA	77JER 01
47.02	0.08	34	14NAA	80KHA 02	71	3		PAA	76CHA 01
<u>Os (ng/g)</u>					71	3	D	PAA	77CHA 01
<	400	L	UU	80HEN 01	72	5		EXRF	77GIA 01
<	4000		RTNA	77NAD 02	74	4		FAA	76BLO 01
<u>P (ug/g)</u>					74	4		FAA	75BLO 02
750	50		ICPES	85HAR 01	74	9		OES	76WEW 01
880			AA	76WEW 01	75			OES	80WAL 01
898			ICPES	80NAD 01	75	5		PAA	75OND 01
910	30		ICPES	84BOT 01	75	5	D	NAA	74OND 01
1040	70		ICPES	84NAD 01	76			AE+AF	77FEL 01
1090	26		ICPES	81CHU 01	77			ICPES	80NAD 01
1200			UU	80HEN 01	77	6		AA	80STO 02
1300			SSMS	83WEI 02	78	2		IDMS	78CAR 02
1900	100		COLOR	80NAD 01	78	2		AA	76OND 01
3000		35	TCGS	78GLA 04	78	4		IDMS	75KLE 01
					79.6	9.7		HAA	82NAD 01
					80			UU	80HEN 01
					80	10		ICPES	85HAR 01
					81			ICPES	80FLO 01
					81			AA	78WEG 01
					82			AA	76WEW 01
					82	6		FAA	76OWE 01
					100	25		14NAA	81WIL 02
					110			SSMS	83WEI 02
					<u>Pb-21 (pCi/g)</u>				
					3.37	0.13	D	NM	81CAS 01
					3.37	0.13		NM	80CAS 01

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Pd (ng/g)</u>					<u>Rb (ug/g) cont.</u>				
<	2		RTNA	77NAD 02	124	10		ITNA	73ABE 01
<	1000	L	UU	80HEN 01	125			ITNA	78WEA 01
<	4000	L	EXRF	77GIA 01	125	4		EXRF	77NIE 01
					125	10		ITNA	75OND 01
					126	10		PAA	75OND 01
					130	30		ITNA	76OND 01
					136	6		ITNA	85FIL 01
					137	4		14NAA	81WIL 01
					150			UU	80HEN 01
<u>Pr (ug/g)</u>					<u>Re (ng/g)</u>				
<	100	L	OES	76WEW 01	<	200	L	UU	80HEN 01
24			ICPES	80FLO 01	<u>Rh (ug/g)</u>				
28	6		SSMS	78SUG 02	<	0.5	L	UU	80HEN 01
40			SSMS	83WEI 02	<	4	L	EXRF	77GIA 01
92	1		RTNA	84ODD 01	<	30	L	OES	76WEW 01
<u>Pt (ug/g)</u>					<u>Ru (ug/g)</u>				
<	90	L	OES	76WEW 01	<	0.5	L	UU	80HEN 01
0.4			UU	80HEN 01	<	30	L	OES	76WEW 01
0.451	0.011		RTNA	77NAD 01	0.258	0.02		RTNA	77NAD 02
1.38	0.28		RTNA	77NAD 02	3	2		EXRF	77GIA 01
<u>Rb (ug/g)</u>					<u>S (ug/g)</u>				
70	30		ITNA	81WAN 01	2000			XRF	81COH 02
95	1		PAA	76KAT 02	3900	400		TCGS	79FAI 01
96	2		PAA	76KAT 03	3900	400	D	TCGS	80AND 01
100	10	9	ITNA	78LAU 02	4000	400		TCGS	79AND 01
102	5		14NAA	81WIL 02	4400	100		TCGS	77JUR 01
105	10		ITNA	76RAG 01	4930	490	7	NM	83LI 01
108	4	D	NAA	79STE 01	5090	530	7	NM	83LI 01
108	4		EXRF	77GIA 01	7800			XRF	78CAM 02
108.4	3.7		IENA	77ROW 03	9000	500		XRF	79SMI 01
108.4	3.7	D	IENA	77ROW 04	<u>Sb (ug/g)</u>				
110	2		XRF	79SMI 01	4	3		EXRF	77GIA 01
110	9		ITNA	77ROW 04	5			ICPES	82NYG 01
110	22		OES	76WEW 01	5.9	0.3		ITNA	81WAN 01
111	7		ITNA	84GLA 02	5.9	0.5	5	IENA	77ROW 04
111	13.5		ITNA	75NAD 02	5.9	0.5	5	ITNA	77ROW 04
111	14		ITNA	78NAD 02	5.96	0.61		HAA	82NAD 01
112	20		ITNA	76WEW 01	6	0.2		IENA	77ROW 03
114			XRF	78CAM 02	6	0.2	D	NAA	79STE 01
115	10		ITNA	78LAU 02	6.03	0.23	5	IENA	77ROW 04
115	15		ITNA	73SHE 01	6.1	0.4	5	ITNA	77ROW 04
116	10		ITNA	77CHA 01					
116	10	D	ITNA	78RYA 01					
117	6	35	IENA	80GLA 03					
118	7	35	NAA	81GLA 04					
119	7	35	ITNA	81GLA 02					
120			XRF	75KLE 01					
120			SSMS	83WEI 02					
120	10		PAA	76CHA 01					
120	10	D	PAA	77CHA 01					
123	9	35	ITNA	81GLA 03					

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Sb (ug/g) cont.</u>					<u>Sc (ug/g) cont.</u>				
6.2		35	ITNA	81GLA 03	26.5	0.2		ITNA	84GLA 02
6.4	0.2		ITNA	78LAU 02	26.7	0.2	D	ITNA	77ROW 04
6.5	0.2	35	RTNA	78GLA 02	26.7	0.2		ITNA	77ROW 03
6.6	0.3		ITNA	85FIL 01	26.7	0.7	D	NAA	79STE 01
6.72	0.35		ITNA	75NAD 02	26.8	0.2		ITNA	78MAC 01
6.72	0.35		ITNA	78NAD 02	26.9	0.3		ITNA	81WAN 01
6.9			ITNA	78WEA 01	26.9	1.4		ITNA	76OND 01
6.9			SSMS	83WEI 02	27			ITNA	78WEA 01
6.9	0.3		ITNA	76OND 01	27	0.5		ITNA	78LAU 02
6.9	0.5	D	ITNA	78RYA 01	27	0.6		ITNA	76RAG 01
6.9	0.5		ITNA	77CHA 01	27	1		ITNA	75OND 01
6.9	0.6		ITNA	76RAG 01	27	1		ITNA	73ABE 01
6.9	0.6		ITNA	75OND 01	27	2	D	PAA	77CHA 01
7			UU	80HEN 01	27	2		PAA	76CHA 01
7	1.1		PAA	75OND 01	27.5	2.4		ITNA	73SHE 01
7	1.2		PAA	76KAT 03	28	1	35	ITNA	81GLA 02
7.1	0.5	D	PAA	77CHA 01	28.3	0.7	35	ITNA	81GLA 04
7.1	0.5		PAA	76CHA 01	29	3		14NAA	81WIL 02
7.1	0.5		NAA	77JER 01	29.1			ITNA	75MIL 01
7.1	0.7		PAA	76KAT 02	30	1	35	ITNA	81GLA 03
7.14	0.56		PAA	74CHA 01	30	2		ITNA	85FIL 01
7.2	0.3	35	ITNA	81GLA 02	32			ITNA	75KLE 01
7.2	0.3	35	NAA	81GLA 04	41	5		14NAA	81WIL 01
7.2	0.8		ITNA	73ABE 01	45			SSMS	83WEI 02
7.3	0.3		FAA	78HAY 01	<u>Se (ug/g)</u>				
7.4	0.3		ITNA	78MAC 01	3.2			HAA	74BYR 02
7.7	0.5	35	IENA	80GLA 03	4.5	0.7		ASV	76AND 01
7.8			ITNA	75KLE 01	5.5	3.4		ITNA	81WAN 01
7.9			ITNA	84CLE 01	8.7	1.8		ITNA	78MAC 01
8.3	1.8		14NAA	81WIL 02	8.76	0.48		HAA	82NAD 01
8.4	3	13	ICPES	84BOT 01	8.8			XRF	78CAM 02
9.8	2.1		ITNA	76WEW 01	8.8	0.7	9	ITNA	80WAN 01
12.08	0.86		ITNA	73SHE 01	8.8	1.2		ITNA	73ABE 01
17.4			FAA	75POL 01	8.9	0.6		ITNA	80WAN 01
54		13	ICPES	84BOT 01	8.9	1.2		XRF	79SMI 01
<u>Sc (ug/g)</u>					9			ICPES	82NYG 01
20			ICPES	80FLO 01	9	1.4		ITNA	76RAG 01
20			UU	80HEN 01	9	2	35	IENA	80GLA 03
20.7	2.1		PAA	74CHA 01	9.1	0.2		ITNA	78NAD 02
23	0.4		ITNA	76BLO 01	9.1	0.2		ITNA	75NAD 02
23	2.3		OES	76WEW 01	9.1	0.2		ITNA	81CAR 02
24	1		ITNA	76WEW 01	9.1	0.3	35	NAA	81GLA 04
24	2		ICPES	85HAR 01	9.1	1		RTNA	74ORV 01
25.1	0.5		ITNA	75NAD 02	9.2	2.6		ICPES	84BOT 01
25.1	0.5		ITNA	78NAD 02	9.35	0.03		GCMES	75KLE 01
25.5	2	D	ITNA	78RYA 01	9.35	0.03		GCMES	74TAL 02
25.5	2		ITNA	77CHA 01	9.35	0.03		DCPES	81CAR 02
25.6	0.5		IENA	77ROW 04	9.4			SSMS	83WEI 02
26	2	35	IENA	80GLA 03	9.48	0.8		PAA	74CHA 01

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Se (ug/g) cont.</u>					<u>Si (%) cont.</u>				
9.5	0.8		PAA	76CHA 01	22.6			AA	79SIL 01
9.5	0.8	D	PAA	77CHA 01	22.7	0.05		ICPES	84NAD 01
9.6	3.1		ITNA	76BLO 01	22.8	0.8		14NAA	81WIL 01
9.7			COLOR	74BYR 02	23	1		EXRF	77NIE 01
9.8			ITNA	78WEA 01	23	6		14NAA	76BLO 01
9.8	0.5	6	PAA	82SEG 01	23.5	0.5	35	IENA	80GLA 03
9.8	1		ITNA	77CHA 01	24.5	1.1		TCGS	79AND 01
9.8	1	D	ITNA	78RYA 01					
10			UU	80HEN 01	<u>Sm (ug/g)</u>				
10	0.5	9	ITNA	78LAU 02	10.05	0.58		ITNA	73SHE 01
10	0.5	8	SSMS	80KOP 01	10.4	0.9		IENA	77ROW 04
10	0.6		RTNA	80KNA 01	11	1		ITNA	78MAC 01
10	0.9		PAA	80SEG 01	11.4	1.6		IENA	76STE 05
10	0.9	6	PAA	82SEG 01	11.8	1.6		IENA	77ROW 03
10	2		ITNA	76OND 01	12.1	0.4		TCGS	79FAI 01
10.1	2.2		ITNA	76WEW 01	12.1	0.4	D	TCGS	80AND 01
10.2			HAA	80WAL 01	12.1	1	D	ITNA	78RYA 01
10.2	1.4		ITNA	75OND 01	12.1	1		ITNA	77CHA 01
10.2	1.4	D	NAA	74OND 01	12.1	1.4	D	NAA	79STE 01
10.3	0.7	D	RTNA	81GAL 02	12.1	1.4		ITNA	77ROW 04
10.3	0.7		RTNA	81GAL 01	12.3	0.6		RTNA	84ODD 01
10.6	1		ITNA	78LAU 02	12.4			ITNA	78WEA 01
10.6	1.3		ITNA	77ROW 04	12.4	0.5		ITNA	73ABE 01
10.7	0.4		ITNA	85FIL 01	12.4	0.9		ITNA	75OND 01
10.8	0.8	D	NAA	79STE 01	12.8	0.6		ITNA	76WEW 01
10.8	0.8	D	IENA	77ROW 04	12.9	0.3		ITNA	84ODD 01
10.8	0.8		IENA	77ROW 03	13			ITNA	84GLA 02
11	1		EXRF	77GIA 01	13	0.3		TCGS	79AND 01
11	3		ITNA	76KUC 01	13	0.7		ITNA	76RAG 01
12.7	1.8		ITNA	73SHE 01	13	1.3		ITNA	85FIL 01
13.3			ITNA	84CLE 01	13.2			ITNA	82GLA 02
35	13		14NAA	81WIL 02	13.4	0.7		ITNA	76OND 01
35	13		14NAA	81WIL 01	13.5	0.5		ITNA	78LAU 02
<u>Si (%)</u>					13.6	0.88		ITNA	75NAD 02
16			OES	78SUG 01	13.6	0.9		ITNA	78NAD 02
17	3.4		OES	76WEW 01	14.9	1	35	ITNA	81GLA 03
17.7		35	TCGS	78GLA 04	15			ITNA	75KLE 01
20	1.6		PAA	76CHA 01	15.8	0.3		ICPES	81CHU 01
20	1.6	D	PAA	77CHA 01	17			SSMS	83WEI 02
20.4			ICPES	80NAD 01	20	3		SSMS	78SUG 02
20.9			UU	80HEN 01					
21	2		PAA	75OND 01					
21.5	1.4		XRF	79SMI 01					
21.8	0.3		TCGS	80AND 01					
21.8	0.3		TCGS	79FAI 01					
21.9			XRF	78CAM 02					
22	1	35	AA	81GLA 03					
22.4	0.3		ICPES	80NAD 01					
22.4	1.6		14NAA	81WIL 02					

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Sn (ug/g)</u>					<u>Sr (ug/g) cont.</u>				
<	5		ICPES	84CLE 01	1410	400		14NAA	77VAN 01
2.8			SSMS	83WEI 02	1430	30		XRF	79SHI 01
3			UU	80HEN 01	1430	60	5	IENA	76STE 05
5	2		EXRF	77GIA 01	1430	60	D	NAA	79STE 01
5.7	0.6		NM	81IMU 01	1460	280		ITNA	85FIL 01
6.7	1.4		XRF	79SHI 01	1480	50		ITNA	77MAE 01
10	5		OES	76WEW 01	1480	60		IENA	77ROW 03
10.2	1.4		ITNA	77CHA 01	1480	60		ITNA	77ROW 04
10.2	1.4	D	ITNA	78RYA 01	1500			UU	80HEN 01
12	1		PAA	76CHA 01	1500	180	D	ITNA	78RYA 01
12	1	D	PAA	77CHA 01	1500	180		ITNA	77CHA 01
12.5	1.2		PAA	74CHA 01	1500	200		ITNA	78LAU 02
12.7	0.82		HAA	82NAD 01	1510	60	5	IENA	80GLA 03
740	210		ITNA	73SHE 01	1520	35		IENA	77ROW 04
<u>SO₄ (%)</u>					1541	188		ITNA	81WAN 01
0.98			UU	80HEN 01	1600	100	9	ITNA	78LAU 02
<u>Sr (ug/g)</u>					1620			ICPES	80FLO 01
126			EXRF	78WEG 01	1700	300		ITNA	75OND 01
869	33		ITNA	73SHE 01	1900	200		ITNA	73ABE 01
1200	300		ITNA	76STE 05	2300	1100		OES	76WEW 01
1240	30		ICPES	84BOT 01	8000			XRF	76WEW 01
1244	6		PAA	76KAT 02	<u>Ta (ug/g)</u>				
1244	9		PAA	76KAT 03	1.6			ITNA	75KLE 01
1250	230		ITNA	76RAG 01	1.74	0.1	35	ITNA	81GLA 02
1256	37		EXRF	78PEL 01	1.74	0.12	35	NAA	81GLA 04
1260		35	IENA	81GLA 03	1.8			ITNA	78WEA 01
1260	30	5	IENA	80GLA 03	1.8	0.2	35	IENA	80GLA 03
1300		35	IENA	81GLA 04	1.8	0.3		ITNA	76OND 01
1300	200		ITNA	76OND 01	1.8	0.3		ITNA	75OND 01
1301			XRF	75KLE 01	1.81	0.08		ITNA	84GLA 02
1310	50		14NAA	81WIL 01	1.84	0.09		ITNA	85FIL 01
1310	60		14NAA	81WIL 02	1.9	0.1		ITNA	78LAU 02
1340			AA	79SIL 01	1.9	0.2	35	ITNA	81GLA 03
1340	70		ICPES	85HAR 01	1.9	0.25	D	ITNA	78RYA 01
1340	100		ITNA	78MAC 01	1.9	0.25		ITNA	77CHA 01
1342	20		EXRF	77GIA 01	2.0			UU	80HEN 01
1360	110	5	IENA	76STE 05	2.00	0.06		IENA	77ROW 03
1370	120	D	PAA	77CHA 01	2.00	0.06	D	NAA	79STE 01
1370	120		PAA	76CHA 01	2.00	0.06	D	IENA	77ROW 04
1373	95		PAA	74CHA 01	2.00	0.1		ITNA	78MAC 01
1375	28		ICPES	81CHU 01	2.00	0.2		ITNA	76RAG 01
1380			ICPES	84CLE 01	2.01	0.14		ITNA	77ROW 04
1390			ITNA	75MIL 01	2.04	0.03		ITNA	78NAD 02
1390			XRF	78CAM 02	2.04	0.03		ITNA	75NAD 02
1400			SSMS	83WEI 02	2.1	0.2		ITNA	81WAN 01
1406	80		ITNA	75NAD 02	2.2			ITNA	75MIL 01
1406	80		ITNA	78NAD 02	2.74	0.25		ITNA	73SHE 01
					3.5	0.3		ITNA	73ABE 01

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Tb (ug/g)</u>					<u>Th (ug/g) cont.</u>				
0.22	0.04		ITNA	73SHE 01	24	2	35	RTNA	78GLA 02
1.2	0.2		ITNA	78MAC 01	24	2		ITNA	76OND 01
1.5	0.3		ITNA	81WAN 01	24.4	2.2		ITNA	75OND 01
1.5	0.4		ITNA	76OND 01	24.5	0.4		ITNA	84GLA 02
1.53	0.11		ITNA	84GLA 02	25	0.9	35	NAA	81GLA 04
1.7	0.8		ITNA	85FIL 01	25	1	35	ITNA	81GLA 02
1.8			ITNA	75MIL 01	25	2		ITNA	73SHE 01
1.87	0.15		ITNA	76RAG 01	26			ITNA	75MIL 01
1.9			SSMS	83WEI 02	26			ITNA	75KLE 01
1.9	0.1		ITNA	78LAU 02	26			DNA	75MIL 01
1.9	0.3		ITNA	75OND 01	26.2	1.3		GAMMA	73ABE 01
1.99	0.16		ITNA	77ROW 04	26.2	1.3		GAMMA	75OND 01
2	0.1	35	NAA	81GLA 04	28			SSMS	83WEI 02
2	0.1	35	IENA	80GLA 03	28	2		ITNA	73ABE 01
2	0.25	D	ITNA	78RYA 01	32.2	0.2		ITNA	78NAD 02
2	0.25		ITNA	77CHA 01	32.2	0.2		ITNA	75NAD 02
2	0.3		ITNA	73ABE 01	<u>Th-228 (pCi/g)</u>				
2.01	0.06	D	IENA	77ROW 04	2.23	0.05		NM	80CAS 01
2.01	0.06		IENA	77ROW 03	2.23	0.05	D	NM	81CAS 01
2.01	0.06	D	NAA	79STE 01	<u>Th-23 (pCi/g)</u>				
2.4	0.1		ITNA	84ODD 01	3.74	0.17	D	NM	81CAS 01
2.5	0.1		RTNA	84ODD 01	3.74	0.17		NM	80CAS 01
3.12	0.02		ITNA	75NAD 02	<u>Th-232 (pCi/g)</u>				
3.12	0.02		ITNA	78NAD 02	2.45	0.08	D	NM	81CAS 01
3.3	0.5		SSMS	78SUG 02	2.45	0.08		NM	80CAS 01
<u>Te (ug/g)</u>					<u>Ti (ug/g)</u>				
<	0.5	L	UU	80HEN 01	3000			XRF	76WEW 01
<	5	L	EXRF	77GIA 01	6000			UU	80HEN 01
0.92	0.05		HAA	82NAD 01	6000	400		ITNA	78MAC 01
2.3	0.3		PAA	76CHA 01	6100			OES	78SUG 01
2.3	0.3	D	PAA	77CHA 01	6100	200		ITNA	78NAD 02
2.32	0.2		PAA	74CHA 01	6100	200		ITNA	75NAD 02
9.9	1.1	35	RTNA	75GLA 01	6300	200		ICPES	84BOT 01
<u>Th (ug/g)</u>					6420			ITNA	75KLE 01
20			UU	80HEN 01	6600	300		ICPES	85HAR 01
21	3		EXRF	77GIA 01	6800			AA	79SIL 01
22.8	0.5		ITNA	76BLO 01	6800	200		ICPES	84NAD 01
23	2		ITNA	85FIL 01	6800	1100		ITNA	76OND 01
23.6	0.8		ITNA	76RAG 01	6960		35	TCGS	78GLA 04
23.8	0.4		ITNA	77ROW 04	7000	100	35	IENA	80GLA 03
24	0.5		IENA	77ROW 03	7000	300		ITNA	77ROW 03
24	0.5	D	IENA	77ROW 04	7000	300		ITNA	76STE 05
24	0.5	D	NAA	79STE 01	7000	300	D	NAA	79STE 01
24	0.8		ITNA	81WAN 01					
24	1	35	ITNA	81GLA 03					
24	1		ITNA	78LAU 02					
24	1	35	IENA	80GLA 03					

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ti (ug/g) cont.</u>					<u>Tm (ug/g)</u>				
7000	700		ITNA	76WEW 01	0.45			SSMS	83WEI 02
7070	180		ICPES	81CHU 01	1.3			ITNA	75MIL 01
7100	100		ICPES	80NAD 01	1.3	0.3		SSMS	78SUG 02
7150	1200		ITNA	76RAG 01	1.36	0.02		RTNA	84ODD 01
7200	200	35	NAA	81GLA 03	1.43	0.04		ITNA	84ODD 01
7200	200		TCGS	79FAI 01					
7200	200	D	TCGS	80AND 01	<u>U (ug/g)</u>				
7200	1400		OES	76WEW 01					
7210	95		TCGS	79AND 01	8.4	0.56		ITNA	73SHE 01
7230	400		PAA	74CHA 01	8.6	1	35	FLUOR	78GLA 01
7250	360	D	PAA	77CHA 01	9	6		EXRF	77GIA 01
7250	360		PAA	76CHA 01	10.5	1		ITNA	76RAG 01
7300			XRF	78CAM 02	10.6			ITNA	81WAN 01
7300	150		14NAA	81WIL 01	10.6	0.6	35	IENA	78GLA 01
7300	280		ITNA	77CHA 01	11	0.4	6	PAA	82SEG 01
7300	280	D	ITNA	78RYA 01	11.1	1.7		ITNA	76OND 01
7300	400		PAA	75OND 01	11.3	0.3		ITNA	75NAD 02
7330			ICPES	80FLO 01	11.3	0.3		ITNA	78NAD 02
7360	344		EXRF	78PEL 01	11.3	0.3	35	DNA	78GLA 01
7400			ITNA	78WEA 01	11.5	0.5	35	IENA	80GLA 03
7400	300		ITNA	75OND 01	11.5	0.5	35	DNA	81GLA 03
7400	500		ITNA	78LAU 02	11.7			DNA	75MIL 01
7400	800		AA	76OND 01	11.7	2		IDMS	78CAR 02
7500			EXRF	78WEG 01	11.8			IDMS	75KLE 01
7500			ICPES	80NAD 01	11.9	0.4	6	PAA	82SEG 01
7500	500	35	ITNA	81GLA 02	11.9	0.6		PAA	80SEG 01
7600	200		14NAA	81WIL 02	12			ITNA	78WEA 01
7600	800		ITNA	73ABE 01	12	0.5		GAMMA	75OND 01
7660	70		PAA	76KAT 02	12	0.5		GAMMA	73ABE 01
7660	100		PAA	76KAT 03	12	0.5	D	NAA	74OND 01
7700	300		XRF	79SMI 01	12.1	0.8	13	PAA	81SEG 01
8140			ICPES	84CLE 01	12.1	2	35	RTNA	75GLA 01
8200	1100		ITNA	81WAN 01	12.2	0.5	D	NAA	79STE 01
8600	1100		EXRF	77GIA 01	12.2	0.6		IENA	77ROW 04
8700			AA	76WEW 01	12.2	1	13	PAA	81SEG 01
8900	752		ITNA	73SHE 01	12.4	0.6		IENA	77ROW 03
					12.7	0.5	D	NAA	79STE 01
					12.7	0.5		IENA	76STE 05
					12.8			ITNA	80EDD 01
					13			SSMS	83WEI 02
					13.5	1.2		ITNA	76STE 05
					13.8			ITNA	75MIL 01
					15			UU	80HEN 01
<u>Tl (ug/g)</u>					<u>U-234 (pCi/g)</u>				
2			UU	80HEN 01	4.07	0.12	D	NM	81CAS 01
3.5	0.5		PAA	80SEG 01	4.07	0.12		NM	80CAS 01
3.5	0.5	6	PAA	82SEG 01					
3.64	0.34		PAA	74CHA 01					
3.7	0.4		PAA	76CHA 01					
3.7	0.4	D	PAA	77CHA 01					
3.8	0.27	8	SSMS	80KOP 01					
3.8	0.5	6	PAA	82SEG 01					
5			AA	76WEW 01					
5.3			POT	82CHR 01					
18	6		14NAA	81WIL 01					
18	6		14NAA	81WIL 02					

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>U-235 (pCi/g)</u>					<u>V (ug/g) cont.</u>				
0.179	0.012		NM	80CAS 01	237	9		ITNA	77MAE 01
0.179	0.012	D	NM	81CAS 01	237	20	D	NAA	79STE 01
					237	20		ITNA	76STE 05
<u>U-238 (pCi/g)</u>					237	20		ITNA	77ROW 03
					240			ITNA	75KLE 01
4.01	0.04	D	NM	81CAS 01	270	60		ITNA	76OND 01
4.01	0.04		NM	80CAS 01	271		6	SSMS	78GUI 01
					290	80		ITNA	76RAG 01
<u>V (ug/g)</u>					295	156		EXRF	77GIA 01
					410			AA	76WEW 01
151		6	SSMS	78GUI 01	<u>W (ug/g)</u>				
174	55		XRF	79SMI 01					
182			XRF	78CAM 02					
190	50		TCGS	79FAI 01	3.8	0.7		ITNA	81WAN 01
190	50	D	TCGS	80AND 01	3.9	0.4	D	NAA	79STE 01
196	10		ITNA	78MAC 01	3.9	0.4		IENA	77ROW 04
200			UU	80HEN 01	4	0.4		IENA	77ROW 03
200	34		EXRF	78PEL 01	4.2	0.4		IENA	76STE 05
201	6		FAA	76OWE 01	4.5	1	D	ITNA	78RYA 01
204	15		ITNA	76BLO 01	4.5	1		ITNA	77CHA 01
208	12		PAA	74CHA 01	4.6			ITNA	78WEA 01
210			OES	78SUG 01	4.6			SSMS	83WEI 02
210			SSMS	83WEI 02	4.6	1.6		ITNA	75OND 01
210	12	D	PAA	77CHA 01	4.8	1.5		ITNA	76OND 01
210	12		PAA	76CHA 01	4.9	0.7	35	RENA	81GLA 03
214	12		ICPES	84NAD 01	5			UU	80HEN 01
216			AA	78GUI 01	5	1	35	IENA	80GLA 03
216			EXRF	78WEG 01	5.2	0.3	35	RTNA	78GLA 02
219			ICPES	80NAD 01	5.5	1.5		ITNA	76RAG 01
220	15	D	ITNA	78RYA 01	5.8	0.3	35	NAA	81GLA 04
220	15		ITNA	73ABE 01	6	1		ITNA	78MAC 01
220	15		ITNA	77CHA 01	12.7	1.1		ITNA	73SHE 01
220	20	35	ITNA	81GLA 03	<u>Y (ug/g)</u>				
221			ITNA	78WEA 01					
222	3		ICPES	84BOT 01					
223	9.9		ITNA	75NAD 02	30			UU	80HEN 01
223	10		ITNA	78NAD 02	44	4.2		OES	76WEW 01
224	6.7		ICPES	81CHU 01	56			SSMS	83WEI 02
225	9		ICPES	85HAR 01	60	5		EXRF	77GIA 01
225	20		ITNA	76WEW 01	60	8		PAA	77CHA 01
226			FAA	78GUI 01	62	4		ICPES	85HAR 01
230	10		ITNA	78LAU 02	62	10		PAA	75OND 01
230	10	35	ITNA	81GLA 02	65			ICPES	80FLO 01
230	10.6		ITNA	73SHE 01	66			XRF	78CAM 02
230	12		OES	76WEW 01	66	2		PAA	76KAT 03
230	30	35	IENA	80GLA 03	67	1		PAA	76KAT 02
233			ICPES	80FLO 01	68	1		XRF	79SMI 01
234	34		ITNA	81WAN 01	68	16		SSMS	78SUG 02
235	13	D	NAA	74OND 01	150	7		14NAA	81WIL 01
235	15		ITNA	75OND 01	150	15		14NAA	81WIL 02
236			ICPES	84CLE 01					

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Yb (ug/g)</u>					<u>Zn (ug/g) cont.</u>				
4.7	0.4		ITNA	78MAC 01	204	12	35	FAA	81GLA 03
4.8	0.6		ITNA	76WEW 01	204	13	5	IENA	80GLA 03
5.5	0.3		ITNA	78LAU 02	205	10	6	PAA	82SEG 01
5.5	1.4		ITNA	78NAD 02	205	20		PAA	80SEG 01
5.53	0.14		ITNA	75NAD 02	206			ICPES	84CLE 01
5.7	0.56		OES	76WEW 01	206	7.3		ITNA	81WAN 01
5.7	0.6		ITNA	76OND 01	207			ITNA	78WEA 01
5.9	0.3		ITNA	76RAG 01	208			XRF	75KLE 01
5.9	0.3		IENA	77ROW 04	208	9.5		AA	80STO 02
5.9	0.4		ITNA	84GLA 11	208.1	24		ITNA	74GAL 01
6.1	0.18		ICPES	81CHU 01	208.2	3.6		AA	77MIT 01
6.2	0.2	5	ITNA	77ROW 04	210			SSMS	83WEI 02
6.2	3.4		ITNA	73SHE 01	210			OES	78SUG 01
6.6	0.4	D	ITNA	77ROW 04	210			ICPES	80NAD 01
6.6	0.4	D	NAA	79STE 01	210	36		OES	76WEW 01
6.6	0.4		ITNA	77ROW 03	211			ICPES	80EPS 03
6.77	0.06		RTNA	84ODD 01	212			ICPES	80FLO 01
6.8			ITNA	75MIL 01	212	7		XRF	79SMI 01
6.8	0.1		ITNA	84ODD 01	212	14		ITNA	75NAD 02
7			ICPES	80FLO 01	212	14		ITNA	78NAD 02
7	3		ITNA	75OND 01	212	20		FAA	76OWE 01
7.2	2.1	D	ITNA	78RYA 01	213			ICPES	84SOB 01
7.2	2.1		ITNA	77CHA 01	213.5	1		XRF	74GAL 01
8			SSMS	83WEI 02	214			AA	78GEL 01
8	0.5	35	ITNA	81GLA 03	214	2		AA	75EPS 01
8.4	0.6		ITNA	81WAN 01	214	2		AF	75EPS 01
8.9	0.9		ITNA	73ABE 01	214	16		PAA	74CHA 01
9	1.4		SSMS	78SUG 02	215	20		PAA	76CHA 01
<u>Zn (ug/g)</u>					215	20	D	PAA	77CHA 01
180.7	4		AA	74GAL 01	215	20		NAA	77JER 01
195	23		RTNA	74ORV 01	216			FAA	80WAL 01
197	7		ICPES	84NAD 01	216	2.4		AA	74RAI 01
198			AA	78GUI 01	216	14		EXRF	77GIA 01
199	7		ICPES	84BOT 01	216	25	D	NAA	74OND 01
200			UU	80HEN 01	216	25		PAA	75OND 01
200			EXRF	78WEG 01	218	33		AA	82HAR 01
200	8		IENA	77ROW 04	219	4		ICPES	79EPS 01
200	10	9	ITNA	78LAU 02	220	5		ITNA	76OND 01
200	10		EXRF	78PEL 01	220	10	6	PAA	82SEG 01
200	20		ITNA	77CHA 01	220	130		ITNA	76BLO 01
200	20		ITNA	78LAU 02	221			AA	79SIL 01
200	20		ITNA	78RYA 01	221	16	5	IENA	80GLA 03
200	20	D	ITNA	78RYA 01	221	16	35	NAA	81GLA 04
200.5	4		RTNA	74GAL 01	228	6.9		ICPES	81CHU 01
201			AE+AF	77FEL 01	230	40		ITNA	76RAG 01
201	6	D	ITNA	77ROW 04	232	9		ICPES	85HAR 01
201	6	D	NAA	79STE 01	234			AA	78WEG 01
201	6		ITNA	77ROW 03	250			AA	76WEW 01
201	8		AA	76OND 01					
202			XRF	78CAM 02					

TABLE 1633-2: INDIVIDUAL DATA FOR NBS SRM 1633 (cont.)

Conc	Uncer	Com	Method	Reference	
<u>Zn (ug/g) cont.</u>					
270		6	SSMS	78GUI 01	
270	30		ITNA	78MAC 01	
283		6	SSMS	78GUI 01	
308	75		ITNA	76WEW 01	
700	220		ITNA	73SHE 01	
<u>Zr (ug/g)</u>					
160	34		OES	76WEW 01	
182	76		ITNA	76RAG 01	
200			UU	80HEN 01	
223	6.7		ICPES	81CHU 01	
286	8	35	IENA	81GLA 04	
288			ICPES	80FLO 01	
290	7		EXRF	77GIA 01	
290	20	5	IENA	80GLA 03	
298	6		PAA	76KAT 02	
298	10		PAA	76KAT 03	
300	20	D	PAA	77CHA 01	
300	20		PAA	76CHA 01	
301	20		PAA	75OND 01	
301	22		PAA	74CHA 01	
305			XRF	78CAM 02	
310	20		ITNA	77CHA 01	
310	20	D	ITNA	78RYA 01	
310	20	9	ITNA	78LAU 02	
310	70		IENA	77ROW 03	
310	70	D	IENA	77ROW 04	
310	70	D	NAA	79STE 01	
311	8		XRF	79SMI 01	
340	50	5	IENA	80GLA 03	
380	20		14NAA	81WIL 02	
400			SSMS	83WEI 02	
410			ITNA	77ROW 04	
410	20		14NAA	81WIL 01	
500			ITNA	75MIL 01	
640	140		ITNA	73SHE 01	

TABLE 1633A-1: COMPILED DATA FOR NBS SRM 1633A TRACE ELEMENTS IN COAL FLY ASH (revised 3/1/86)

ELE	UNITS	NBS		CONSENSUS		MEDIAN	RANGE		AA		NAA		ICPES		XRF		OTHER METHODS	
		Mean	SD	Mean	SD		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Ag	ng/g	---	---	< 300	---	---	---	---	---	---	< 300	---	---	---	---	---	---	---
Al	%	14.3 ± 1.0	---	14.4 ± 0.7 (27)	---	14.4	13 - 16.5	---	14.5	(1)	14.1 ± 0.3	(9)	14.3 ± 0.6 (7)	---	15.7 ± 1.2 (7)	---	15	(1) CPAA
Al	%	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	13.8	(1) ICPMS
Al	%	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	14.15	(2) TGS
As	ug/g	145 ± 15	---	146 ± 4 (26)	---	145	138.4 - 153	---	144 ± 6 (8)	---	146 ± 2 (11)	---	147 ± 9 (3)	---	149 ± 4 (3)	---	141	(1) AE-AF
As	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	148	(1) ICPMS
As	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	138	(1) POL
B	ug/g	---	---	40.3 ± 2.1 (7)	---	39.2	37.9 - 44	---	---	---	---	---	39 (1)	---	---	---	44	(1) OES
B	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	39.8 ± 1.6 (5)	TCGS
Ba	ug/g	1500	---	1420 ± 100 (23)	---	1440	1210 - 1600	---	---	---	1390 ± 120 (17)	---	1490 ± 80 (5)	---	1400 (2)	---	---	---
Be	ug/g	12	---	12.8 ± 0.6 (11)	---	13	12 - 13.6	---	13.0 (2)	---	---	---	12.8 ± 0.6 (7)	---	---	---	12	(1) OES
Be	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	13	(1) ICPMS
Bi	ug/g	---	---	1.26 (2)	---	---	1.11 - 1.42	---	1.11 (1)	---	---	---	---	---	---	---	1.42	(1) AF
Br	ug/g	---	---	2.3 (2)	---	---	2.2 - 2.40	---	---	---	2.3 (2)	---	---	---	---	---	---	---
Ca	%	1.11 ± 0.01	---	1.14 ± 0.06 (27)	---	1.12	1.05 - 1.27	---	1.12 (2)	---	1.12 ± 0.05 (10)	---	1.10 ± 0.07 (7)	---	1.18 ± 0.07 (7)	---	1.24	(2) TGS
Ca	%	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1.1	(1) ICPMS
Cd	ug/g	1.00 ± 0.15	---	1.12 ± 0.17 (9)	---	1.07	0.901 - 1.36	---	0.90 (1)	---	---	---	1.2 (1)	---	---	---	0.95	(1) IDMS
Cd	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1.32 ± 0.04 (3)	AF
Cd	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1.04	(2) TGS
Cd	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.96	(1) ICPMS
Ce	ug/g	180	---	175 ± 7 (13)	---	174	163 - 186	---	---	---	175 ± 7 (13)	---	---	---	---	---	---	---
Cl	ug/g	---	---	< 69	---	---	---	---	---	---	< 69	---	---	---	---	---	---	---
Co	ug/g	46	---	43 ± 3 (21)	---	44	37 - 47	---	45.6 (2)	---	44 ± 2 (13)	---	35 (2)	---	38 (1)	---	44.9 ± 1.0 (3)	COLOR
Cr	ug/g	196 ± 6	---	194 ± 7 (21)	---	192	185 - 210	---	196 ± 6 (3)	---	192 ± 4 (11)	---	193 ± 10 (5)	---	172 (2)	---	210	(1) ICPMS
Cs	ug/g	11	---	10.5 ± 0.7 (16)	---	10.5	9.3 - 11.8	---	---	---	10.5 ± 0.7 (16)	---	---	---	---	---	---	---
Cu	ug/g	118 ± 3	---	120 ± 4 (11)	---	120	115 - 128	---	106 (2)	---	124 (1)	---	118 ± 2 (5)	---	115 ± 17 (3)	---	123	(1) ICPMS
Cu	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	116.1	(1) IDMS
Dy	ug/g	---	---	15.6 ± 1.2 (8)	---	15	14.3 - 17.4	---	---	---	15.6 ± 1.2 (8)	---	---	---	---	---	---	---
Eu	ug/g	4	---	3.7 ± 0.2 (13)	---	3.7	3.19 - 4.06	---	---	---	3.7 ± 0.2 (13)	---	---	---	---	---	---	---
F	ug/g	---	---	94 ± 20 (4)	---	87	70 - 114	---	---	---	---	---	---	---	---	---	---	---
F	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	100	(2) CPAA
Fe	%	9.40 ± 0.10	---	9.37 ± 0.23 (30)	---	9.38	8.83 - 9.70	---	9.08 ± 0.38 (3)	---	9.48 ± 0.15 (14)	---	9.35 ± 0.11 (6)	---	9.0 ± 0.4 (5)	---	107	(1) SSMS
Fe	%	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	9.16	(1) ICPMS
Ga	ug/g	58	---	56 ± 3 (9)	---	55.7	51 - 62.5	---	58 (1)	---	54 ± 5 (6)	---	---	---	57 ± 5 (3)	---	9.61	(2) TGS
Gd	ug/g	---	---	19 ± 4 (6)	---	17	15.3 - 25	---	---	---	25 (1)	---	---	---	---	---	18 ± 3	(5) TGS
Ge	ug/g	---	---	33.9 ± 0.2 (5)	---	34	33.5 - 34	---	---	---	---	---	33.8 (1)	---	34 (3)	---	33.5	(1) COLOR

TABLE 1633A-1: COMPILED DATA FOR NBS SRM 1633A TRACE ELEMENTS IN COAL FLY ASH (cont.)

ELE	UNITS	NBS		CONSENSUS		MEDIAN	RANGE		AA		NAA		ICPES		XRF		OTHER METHODS	
		Mean \pm SD	(n)	Mean \pm SD	(n)		Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)
H ₂ O-	%	---	(1)	0.35	(1)	---	---	---	---	---	---	---	---	---	---	---	0.35	(1) FD
Hf	ug/g	8	(3)	7.4 \pm 0.3	(13)	7.31	6.6 - 7.80	---	---	---	7.4 \pm 0.3	(13)	---	---	---	---	---	---
Hg	ng/g	160 \pm 10	(3)	164 \pm 24	(3)	151	150 - 192	(2)	150	(2)	---	---	---	---	---	---	192	(1) ICPMS
Ho	ug/g	---	(1)	2.9	(1)	---	---	---	---	---	2.9	(1)	---	---	---	---	---	---
I	ug/g	---	(1)	< 4.5	(1)	---	---	---	---	---	< 4.5	(1)	---	---	---	---	---	---
In	ng/g	---	(4)	158 \pm 5	(4)	160	151 - 160	(1)	160	(1)	157 \pm 5	(3)	---	---	---	---	---	---
K	%	1.88 \pm 0.06	(23)	1.88 \pm 0.05	(23)	1.86	1.77 - 1.99	(3)	1.91 \pm 0.06	(3)	1.85 \pm 0.04	(9)	1.89 \pm 0.14	(5)	1.83 \pm 0.03	(5)	1.96	(2) TGS
K	%	---	(1)	---	(1)	---	---	---	---	---	---	---	---	---	---	---	1.85	(1) ICPMS
K-40	pCi/g	---	(1)	13.9	(1)	---	---	---	---	---	---	---	---	---	---	---	13.9	(1) GAMMA
La	ug/g	---	(15)	84 \pm 8	(15)	83.8	66 - 100	---	---	---	84 \pm 8	(14)	93	(1)	---	---	---	---
Li	ug/g	---	(4)	165 \pm 50	(4)	151	100 - 221	---	---	---	---	---	169	(2)	---	---	100	(1) OES
Li	ug/g	---	(8)	---	(8)	---	---	---	---	---	---	---	---	---	---	---	221	(1) CPAA
Lu	ug/g	---	(8)	1.12 \pm 0.18	(8)	1.04	0.93 - 1.44	---	---	---	1.12 \pm 0.18	(8)	---	---	---	---	---	---
Mg	ug/g	4550 \pm 100	(14)	4570 \pm 450	(14)	4600	3800 - 5700	(2)	4395	(2)	5500 \pm 900	(3)	4680 \pm 110	(6)	3800	(1)	4440	(1) ICPMS
Mg	ug/g	---	(21)	---	(21)	---	---	---	---	---	---	---	---	---	---	---	4800	(1) CPAA
Mn	ug/g	179 \pm 8	(2)	188 \pm 15	(2)	188	167 - 230	(1)	167	(1)	191 \pm 25	(11)	191 \pm 20	(6)	198	(2)	190	(1) TGS
Mn	ug/g	---	(8)	---	(8)	---	---	---	---	---	---	---	---	---	---	---	206	(1) ICPMS
Mo	ug/g	29	(8)	30 \pm 3	(8)	29.2	26 - 36	---	---	---	31 \pm 4	(4)	32	(1)	28	(2)	29.2	(1) ICPMS
Na	ug/g	1700 \pm 100	(22)	1730 \pm 110	(22)	1750	1484 - 2020	(2)	1580	(2)	1750 \pm 60	(12)	1700 \pm 130	(5)	2200	(1)	1670	(1) ICPMS
Na	ug/g	---	(1)	---	(1)	---	---	---	---	---	---	---	---	---	---	---	1769	(1) CPAA
Na	ug/g	---	(2)	---	(2)	---	---	---	---	---	---	---	---	---	---	---	2100	(1) TGS
Nb	ug/g	---	(5)	28	(5)	---	24 - 31.5	---	---	---	---	---	---	---	28	(2)	---	---
Nd	ug/g	---	(16)	74 \pm 10	(16)	77.3	65.6 - 89	(1)	---	---	79 \pm 9	(3)	---	---	---	---	65.8	(2) TGS
Ni	ug/g	127 \pm 4	(13)	124 \pm 13	(13)	127	97 - 140	(1)	134	(1)	120 \pm 18	(4)	130 \pm 9	(4)	111 \pm 17	(5)	124	(1) VOLT
Ni	ug/g	---	(1)	---	(1)	---	---	---	---	---	---	---	---	---	---	---	132	(1) ICPMS
Ni	ug/g	---	(1)	---	(1)	---	---	---	---	---	---	---	---	---	---	---	133	(1) COLOR
O	%	---	(7)	47.66	(7)	---	---	---	---	---	---	---	---	---	---	---	47.66	(1) 14NAA
P	ug/g	---	(13)	1690 \pm 240	(13)	1744	1320 - 2000	(1)	2000	(1)	---	---	1570 \pm 240	(4)	1700	(1)	1840	(1) ICPMS
Pb	ug/g	72.4 \pm 0.4	(2)	72 \pm 4	(2)	72	64 - 75.9	(1)	72.4	(1)	---	---	68 \pm 8	(4)	73 \pm 4	(6)	72	(1) POT
Pb	ug/g	---	(2)	---	(2)	---	---	---	---	---	---	---	---	---	---	---	71.8	(1) IDMS
Pb	ug/g	---	(2)	---	(2)	---	---	---	---	---	---	---	---	---	---	---	70.4	(1) ICPMS
Pb-210	pCi/g	---	(1)	3.65	(1)	---	3.4 - 3.9	---	---	---	---	---	---	---	---	---	3.9	(1) NM
Pb-210	pCi/g	---	(2)	---	(2)	---	---	---	---	---	---	---	---	---	---	---	3.4	(1) GAMMA
Po-210	pCi/g	---	(1)	---	(1)	---	---	---	---	---	---	---	---	---	---	---	3.75	(1) RAS
Pr	ug/g	---	(1)	18.4	(1)	---	17.9 - 18.9	(2)	---	---	18.4	(2)	---	---	---	---	---	---
Ra-226	pCi/g	---	(1)	3.2	(1)	---	---	---	---	---	---	---	---	---	---	---	---	---
Rb	ug/g	131 \pm 2	(13)	138 \pm 11	(13)	136	121 - 163	(9)	---	---	142 \pm 15	(9)	---	---	136 \pm 10	(5)	3.2	(1) GAMMA

TABLE 1633A-1: COMPILED DATA FOR NBS SRM 1633A TRACE ELEMENTS IN COAL FLY ASH (cont.)

ELE	UNITS	NBS		CONSENSUS		MEDIAN	RANGE	AA		NAA		ICPES		XRF		OTHER METHODS	
		Mean \pm SD	(n)	Mean \pm SD	(n)			Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)
S	ug/g	1800	(4)	1900 \pm 700	(4)	1350	1200 - 2700	---	---	---	---	1200	(1)	2300	(1)	1350	(1) ICPMS
S	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2700	(1) TCGS
S-32/34 ratio		---	---	22.641	(1)	---	---	---	---	---	---	---	---	---	---	22.641	(1) IDMS
S-33/34 ratio		---	---	0.1781	(1)	---	---	---	---	---	---	---	---	---	---	0.1781	(1) IDMS
Sb	ug/g	6.8 \pm 0.4	(14)	6.9 \pm 0.5	(14)	6.88	6.3 - 7.8	7.3 \pm 1.4	(3)	7.0 \pm 0.5	(11)	---	---	---	---	6.88	(1) ICPMS
Sb	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	4.8	(1) AF
Sc	ug/g	40	(14)	39 \pm 3	(14)	39	34 - 43	---	---	39.5 \pm 1.9	(11)	40.3	(1)	34	(1)	---	---
Se	ug/g	10.3 \pm 0.6	(18)	10.0 \pm 1.7	(18)	10	6.2 - 13	10.4 \pm 0.5	(3)	10.5 \pm 1.5	(8)	10.5	(2)	7.8 \pm 1.2	(4)	6.2	(1) AF
Se	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	12	(1) ICPMS
Si	%	22.8 \pm 0.8	(15)	23.0 \pm 0.9	(15)	23	21 - 24.2	24.05	(2)	23.9	(1)	23.5 \pm 0.4	(4)	22.4 \pm 1.0	(6)	21.6	(2) TCGS
Si	%	---	---	---	---	---	---	---	---	---	---	---	---	---	---	22.16	(1) ICPMS
Sm	ug/g	---	(16)	17.0 \pm 1.5	(16)	16.7	14.5 - 20	---	---	17.5 \pm 1.9	(13)	---	---	---	---	16.3 \pm 0.4	(4) TCGS
Sn	ug/g	---	(5)	10 \pm 6	(5)	6.36	3.96 - 18.5	6.33	(2)	---	---	18.5	(1)	---	---	14.8	(1) AF
Sn	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	3.96	(1) ICPMS
Sr	ug/g	830 \pm 30	(20)	810 \pm 40	(20)	815	740 - 890	---	---	805 \pm 37	(12)	790 \pm 50	(4)	840 \pm 60	(5)	---	---
Ta	ug/g	---	(12)	2.0 \pm 0.2	(12)	1.94	1.71 - 2.30	---	---	2.0 \pm 0.2	(12)	---	---	---	---	---	---
Tb	ug/g	---	(9)	2.5 \pm 0.3	(9)	2.5	2.1 - 2.9	---	---	2.5 \pm 0.3	(9)	---	---	---	---	---	---
Te	ug/g	---	---	< 3.5	---	---	---	---	---	< 3.5	---	---	---	---	---	---	---
Th	ug/g	24.7 \pm 0.3	(18)	25.1 \pm 1.4	(18)	24.8	22.4 - 28	---	---	25.0 \pm 0.6	(14)	---	---	25 \pm 6	(3)	23.2	(1) ICPMS
Th-232	pci/g	---	(1)	2.4	(1)	---	---	---	---	---	---	---	---	---	---	2.4	(1) GAMMA
Ti	ug/g	8000	(25)	8230 \pm 390	(25)	8100	7400 - 9000	9000	(1)	8200 \pm 400	(11)	7900 \pm 600	(6)	7700 \pm 800	(7)	8500	(2) TCGS
Ti	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	8000	(1) ICPMS
Tl	ug/g	5.7 \pm 0.2	(3)	5.3 \pm 0.8	(3)	5.7	4.4 - 5.7	---	---	5.7	(1)	---	---	4.4	(1)	5.7	(1) ICPMS
Tm	ug/g	---	(1)	2.4	(1)	---	---	---	---	2.4	(1)	---	---	---	---	---	---
U	ug/g	10.2 \pm 0.1	(21)	10.3 \pm 0.3	(21)	10.3	9.66 - 11	---	---	10.2 \pm 0.3	(18)	---	---	11	(1)	10.2	(1) FLUOR
U	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
U-238	pci/g	---	(1)	3.6	(1)	---	---	---	---	---	---	---	---	---	---	10.2	(1) ICPMS
V	ug/g	297 \pm 6	(18)	294 \pm 18	(18)	290	271 - 344	---	---	289 \pm 8	(9)	290 \pm 13	(6)	---	---	3.6	(1) GAMMA
V	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	324	(1) ICPMS
W	ug/g	---	(7)	5.7 \pm 0.7	(7)	5.4	4.71 - 6.9	---	---	5.7 \pm 0.7	(7)	---	---	---	---	360	(1) TCGS
Y	ug/g	---	(4)	82 \pm 6	(4)	82	74 - 89	---	---	---	---	89	(1)	85 \pm 12	(4)	---	---
Yb	ug/g	---	(8)	7.4 \pm 0.7	(8)	7.5	6.02 - 8.3	---	---	7.4 \pm 0.7	(8)	---	---	---	---	---	---
Zn	ug/g	220 \pm 10	(22)	226 \pm 22	(22)	226	189 - 263	228	(2)	240 \pm 17	(5)	226 \pm 20	(6)	231 \pm 23	(5)	192 \pm 4	(3) AF
Zn	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	230	(1) ICPMS
Zr	ug/g	---	(6)	330 \pm 80	(6)	300	220 - 410	---	---	370 \pm 50	(4)	---	---	241	(2)	---	---

TABLE 1633A-2: INDIVIDUAL DATA FOR NBS SRM 1633A (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ag (ug/g)</u>					<u>As (ug/g) cont.</u>				
<	0.3		ITNA	85GAU 04	145		11	FAA	83XIA 01
<	0.6	L	IENA	80GLA 03	145			HAA	84YAM 01
<	1.1	L	ITNA	82SUZ 02	145	6		ITNA	82SUZ 02
					145	8		CPXRF	84AHL 01
					145	8	35	VV	81GLA 04
					145	11		IENA	82GLA 02
					145	15		ITNA	84SIL 01
					145.3	8.1		ITNA	83OBR 01
					146	2		ITNA	85VOG 01
					147			HAA	84TER 04
					147	15		ITNA	85FIL 01
					148	3	35	IENA	80GLA 03
					148	5		ICPMS	86SCI 02
					149	3		ITNA	85SUN 01
					150		11	HAA	82CRO 03
					151		6	EXRF	84JEN 01
					152		6	EXRF	84JEN 01
					153		11	FAA	83XIA 01
					157	11	13	ICPES	84BOT 01
					<u>B (ug/g)</u>				
					37.9	1.7		TCGS	85VOG 01
					39	1		ICPES	82OWE 01
					39	3	35	TCGS	81GLA 04
					39.2	0.7	D	TCGS	80AND 01
					39.2	0.7		TCGS	79FAI 01
					41			TCGS	84HIG 01
					42	4		TCGS	84GLA 01
					44			OES	83MIL 01
					<u>Ba (ug/g)</u>				
					1060			ITNA	82GLA 02
					1100	100	9	ITNA	82SUZ 02
					1210	50	9	ITNA	82SUZ 02
					1240	200	5	IENA	80GLA 03
					1300	90		ITNA	84SUZ 02
					1300	100		CPXRF	84AHL 01
					1333	100	17	ITNA	84KYL 01
					1339	177		ITNA	85SUN 01
					1400	20	5	IENA	80GLA 03
					1400	100		ICPES	84NAD 01
					1400	360		ITNA	85FIL 01
					1430	25	11	ICPES	85SAT 01
					1440	36		ITNA	83OBR 01
					1450	110	35	NAA	81GLA 04
					1471	70	17	ITNA	84KYL 01
					1480	30		ICPES	85HAR 01
					1490	80		ITNA	84GLA 02
					1500	90		ITNA	80GAR 01
<u>As (ug/g)</u>									
52.3			ICPES	85NAR 02					
66			AF	85NAR 02					
96	13		ICPES	84NAD 01					
97	18		CPXRF	80KIR 01					
135		11	HAA	82CRO 03					
135	5		HAA	85YAM 01					
138.4	8.8		POL	83ELK 01					
140	1		ICPES	84LIV 01					
141	8		AE-AF	82MAT 01					
142			ITNA	81SLO 01					
143			RTNA	81SLO 01					
143	8		FAA	84SIL 01					
144	12	13	ICPES	84BOT 01					

TABLE 1633A-2: INDIVIDUAL DATA FOR NBS SRM 1633A (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ba (ug/g) cont.</u>					<u>Ca (%) cont.</u>				
1500	100		ITNA	85VOG 01	1.11	0.076		ITNA	83OBR 01
1500	100		CPXRF	80KIR 01	1.12	0.01	11	ICPES	85SAT 01
1500	200	35	ITNA	81GLA 02	1.12	0.01	11	ICPES	85SAT 01
1520	20	5	IENA	80GLA 03	1.12	0.07		ITNA	85VOG 01
1540	30		ICPES	84BOT 01	1.12	0.08		ITNA	80GAR 01
1600			ICPES	82NAD 02	1.13	0.02	16	EXRF	82PEL 01
1760	300	5	IENA	80GLA 03	1.13	0.12		ITNA	85SUN 01
2350		6	EXRF	84JEN 01	1.14	0.02	16	EXRF	82PEL 01
2370		6	EXRF	84JEN 01	1.14	0.02	16	EXRF	82PEL 01
					1.14	0.04		AA	82GLA 02
					1.16	0.21		ITNA	82SUZ 02
					1.2	0.08		CPXRF	80KIR 01
					1.2	0.2		TCGS	85VOG 01
					1.2155			ICPES	85PEA 01
					1.23	0.16		ITNA	85FIL 01
					1.27		6	EXRF	84JEN 01
					1.27		6	EXRF	84JEN 01
					1.29			ITNA	85GAU 04
					1.29	0.11	D	TCGS	80AND 01
					1.29	0.11		TCGS	79FAI 01
					<u>Cd (ug/g)</u>				
					0.901			AA	84TER 01
					0.95	0.05		IDMS	84BRO 03
					0.96	0.06		ICPMS	86SCI 02
					1.01	0.13		TCGS	85VOG 01
					1.07	0.05	D	TCGS	80AND 01
					1.07	0.05		TCGS	79FAI 01
					1.2	0.6	13	ICPES	84BOT 01
					1.28		6	AF	84NAR 02
					1.31			AF	85NAR 02
					1.36		6	AF	84NAR 02
					3.1			ICPES	85NAR 02
					7.4	3.3	13	ICPES	84BOT 01
					<u>Ce (ug/g)</u>				
					163	6		ITNA	82GLA 02
					167	8	12	ITNA	82SUZ 02
					170	6		ITNA	84SUZ 02
					170	6	35	ITNA	81GLA 02
					172.1	1	17	ITNA	84KYL 01
					173.1	3.2	17	ITNA	84KYL 01
					174	5	12	ITNA	82SUZ 02
					175	4		ITNA	85SUN 01
					180	5	35	NAA	81GLA 04
					180	20		ITNA	85FIL 01
					183	19		ITNA	80GAR 01
					185	5		ITNA	85VOG 01
					186	4	35	IENA	80GLA 03
					230	45		CPXRF	80KIR 01
<u>Be (ug/g)</u>									
12			OES	83MIL 01					
12.16		6	ICPES	85POU 01					
12.2	0.3	11	ICPES	85SAT 01					
12.36		6	ICPES	85POU 01					
12.5	0.8		FAA	85POU 01					
13	0.2		ICPES	84BOT 01					
13	2		ICPMS	86SCI 02					
13.3	0.5	11	ICPES	85SAT 01					
13.4		6	ICPES	85POU 01					
13.5	0.8	6	ICPES	85POU 01					
13.6		D	AA	83TER 01					
13.6			AA	82TER 02					
<u>Bi (ug/g)</u>									
1.11		D	FAA	84TER 03					
1.11			HAA	84TER 02					
1.42			AF	85NAR 02					
<u>Br (ug/g)</u>									
<	4.4		ITNA	84SUZ 02					
<	10	L	IENA	80GLA 03					
2.2	0.3		ITNA	82SUZ 02					
2.4	0.1	5	IENA	80GLA 03					
<u>Ca (%)</u>									
0.025	0.002		AA	82HAR 01					
0.99	0.09		ICPES	84NAD 01					
1.05	0.16	35	ITNA	81GLA 02					
1.08	0.02		ICPES	84BOT 01					
1.08	0.06		CPXRF	84AHL 01					
1.09	0.01		AA	82NAD 02					
1.09	0.02		ICPES	85HAR 01					
1.1	0.08		ICPMS	86SCI 02					
1.1	0.1	35	ITNA	81GLA 04					
1.1	0.3	35	IENA	80GLA 03					
1.11	0.03		ICPES	82NAD 02					

TABLE 1633A-2: INDIVIDUAL DATA FOR NBS SRM 1633A (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Cl (ug/g)</u>					<u>Cs (ug/g)</u>				
<	69	L	ITNA	82SUZ 02	9.3	0.5		ITNA	82GLA 02
					9.6	0.6	17	ITNA	84KYL 01
					9.7	0.6	35	ITNA	81GLA 02
<u>Co (ug/g)</u>					9.9	0.6		ITNA	84GLA 11
33	2		ICPES	85HAR 01	9.9	0.9		ITNA	84GLA 02
37	1		ICPES	84BOT 01	10.1	0.2	35	IENA	80GLA 03
37	3	35	IENA	80GLA 03	10.2	0.2		ITNA	82SUZ 02
38	13		CPXRF	80KIR 01	10.5	0.3	35	NAA	81GLA 04
39	2		ITNA	85FIL 01	10.6	1.1		ITNA	80GAR 01
40			ITNA	82GLA 02	10.7	0.6	17	ITNA	84KYL 01
42.8	0.8	17	ITNA	84KYL 01	10.8	0.3		ITNA	86GAU 01
43.3	1	17	ITNA	84KYL 01	11	1.1		ITNA	35FIL 01
43.5	1.6		ITNA	84GLA 11	11.1	1.2		ITNA	85GAU 04
43.9	0.55		COLOR	85KAT 01	11.2	0.5		ITNA	85VOG 01
44	1	35	ITNA	81GLA 02	11.3	0.5		ITNA	85SUN 01
44	1		ITNA	82SUZ 02	11.8	3.2		ITNA	84SUZ 02
44.2	1.55		AA	85KAT 01	<u>Cu (ug/g)</u>				
44.8	0.8		ITNA	84GLA 02	96	7		CPXRF	84AHL 01
44.8	1	12	COLOR	83KAT 02	96.6	10.7		AA	84KAN 01
45	2		ITNA	84SUZ 02	115	1	11	ICPES	85SAT 01
45.9	0.7		ITNA	85VOG 01	116	4		AA	82HAR 01
46	1.36	12	COLOR	83KAT 02	116	7		ICPES	84NAD 01
46	1.5		ITNA	85SUN 01	116.1	0.8		IDMS	84BRO 03
46.2	1.8		ITNA	80GAR 01	120		11	ICPES	85SAT 01
47	4	35	NAA	81GLA 04	120	2		ICPES	85HAR 01
47	11		AA	82HAR 01	120	4		ICPES	84BOT 01
<u>Cr (ug/g)</u>					120	5.2		CPXRF	80KIR 01
129	2		ICPES	84NAD 01	123	4		ICPMS	86SCI 02
145	44		CPXRF	84AHL 01	124	33		ITNA	84SUZ 02
185	7	12	ITNA	82SUZ 02	128	4		WXRF	84KYL 01
186	6		ICPES	85HAR 01	186		6	EXRF	84JEN 01
186	8	35	ITNA	81GLA 02	188		6	EXRF	84JEN 01
187	8		ICPES	84BOT 01	<u>Dy (ug/g)</u>				
189	3	11	ICPES	85SAT 01	14.3	0.2	35	ITNA	81GLA 02
190	1.5	11	AA	84KAM 01	14.5		35	ITNA	81GLA 04
190	6		ITNA	85SUN 01	15	0.9		ITNA	85SUN 01
190	8		ITNA	85FIL 01	15	3.3		ITNA	83OBR 01
191	13		ITNA	82GLA 02	16.6	1.3		ITNA	80GAR 01
192			ICPES	81WAL 01	16.8	0.3		ITNA	82SUZ 02
193	14		ITNA	84SUZ 02	17.4	0.5		ITNA	84SUZ 02
194	6	12	ITNA	82SUZ 02					
195	7		ITNA	84GLA 02					
196	8	11	AA	84KAM 01					
197	13		ITNA	80GAR 01					
197	18	35	ITNA	81GLA 04					
198	1		ITNA	85VOG 01					
200	11		CPXRF	80KIR 01					
202	16		AA	82HAR 01					
210		11	ICPES	85SAT 01					
210	8		ICPMS	86SCI 02					
482		6	EXRF	84JEN 01					
486		6	EXRF	84JEN 01					

TABLE 1633A-2: INDIVIDUAL DATA FOR NBS SRM 1633A (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Eu (ug/g)</u>					<u>Fe (%) cont.</u>				
2	2	35	IENA	80GLA 03	9.51	0.61		AA	82HAR 01
2.98	0.33		ITNA	80GAR 01	9.52	0.34		TCGS	85VOG 01
3.19	0.08	35	ITNA	81GLA 02	9.53	0.08	11	ICPES	85SAT 01
3.6	0.1		ITNA	84GLA 02	9.58	0.22		ITNA	85SUN 01
3.62	0.04	17	ITNA	84KYL 01	9.62	0.1		ITNA	85GAU 04
3.64	0.25		ITNA	83OBR 01	9.7	0.2	5	IENA	80GLA 03
3.7	0.2	35	ITNA	81GLA 04	9.7	0.2	D	TCGS	80AND 01
3.7	0.2		ITNA	82GLA 02	9.7	0.2		TCGS	79FAI 01
3.7	0.3		ITNA	82SUZ 02	9.7	0.3		ITNA	84SUZ 02
3.7	0.6		ITNA	85FIL 01					
3.72	0.08	17	ITNA	84KYL 01	<u>Ga (ug/g)</u>				
3.9	0.3		ITNA	84SUZ 02	33		6	EXRF	84JEN 01
4	0.2		ITNA	85VOG 01	34		6	EXRF	84JEN 01
4.06	0.14		ITNA	85SUN 01	45	5		ITNA	85FIL 01
<u>F (ug/g)</u>					51	5		ITNA	82SUZ 02
23	2		ISE	83BET 02	54	4		CPXRF	84AHL 01
70			UU	85RIC 01	55	4.6		CPXRF	80KIR 01
87			CPAA	83BIR 01	55.7	4.5		ITNA	83OBR 01
107			SSMS	85CLA 02	56		35	IENA	81GLA 04
114	13		CPAA	85CLA 02	57.5			FAA	85XIA 01
<u>Fe (%)</u>					59	1	35	IENA	80GLA 03
6.7	0.3		CPXRF	84AHL 01	62.5	1		WXRF	84KYL 01
8.4	0.1		ITNA	85FIL 01	<u>Gd (ug/g)</u>				
8.54		6	EXRF	84JEN 01	15.3	0.2		TCGS	79FAI 01
8.6		6	EXRF	84JEN 01	16.3	0.8		TCGS	85VOG 01
8.83	0.43		ICPES	84NAD 01	17	2	4	TCGS	85GLA 05
8.84			AA	82GLA 02	18	2	4	TCGS	85GLA 05
8.88	0.07		AA	82NAD 02	23.5	0.3		TCGS	80AND 01
9.16	0.01		ICPMS	86SCI 02	25	2		ITNA	84SUZ 02
9.21	0.1		ICPES	82NAD 02	<u>Ge (ug/g)</u>				
9.23	0.09	35	ITNA	81GLA 02	33.5	0.7		COLOR	84SHI 01
9.24	0.13	17	ITNA	84KYL 01	33.8	3.4		ICPES	84NAD 02
9.26	0.02	16	EXRF	82PEL 01	34		6	EXRF	84JEN 01
9.2967	0.2097		ICPES	85PEA 01	34		6	EXRF	84JEN 01
9.3	0.02	16	EXRF	82PEL 01	34	2		CPXRF	84AHL 01
9.3	0.1		ICPES	85HAR 01	<u>H2O-T (%)</u>				
9.36	0.02	11	ICPES	85SAT 01	0.35			FD	80KHA 02
9.36	0.49	35	NAA	81GLA 04					
9.38	0.07		ICPES	84BOT 01					
9.4	0.1	5	IENA	80GLA 03					
9.4	0.3	12	ITNA	82SUZ 02					
9.43	0.17	17	ITNA	84KYL 01					
9.48	0.02	16	EXRF	82PEL 01					
9.49	0.1		ITNA	84GLA 02					
9.5	0.15		ITNA	85VOG 01					
9.5	0.3		ITNA	80GAR 01					
9.5	0.3	12	ITNA	82SUZ 02					

TABLE 1633A-2: INDIVIDUAL DATA FOR NBS SRM 1633A (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Hf (ug/g)</u>					<u>K (%) cont.</u>				
6.3	0.7	9	ITNA	82SUZ 02	1.88	0.04		ICPES	82NAD 02
6.6			ITNA	82GLA 02	1.88	0.1	35	ITNA	81GLA 04
7	0.2	17	ITNA	84KYL 01	1.89	0.02	16	EXRF	82PEL 01
7	0.6		ITNA	85FIL 01	1.9	0.02	16	EXRF	82PEL 01
7.2	0.3	35	ITNA	81GLA 02	1.909	0.083		ICPES	85PEA 01
7.2	0.8	9	ITNA	82SUZ 02	1.92	0.04		ITNA	85VOG 01
7.31	0.37		ITNA	85SUN 01	1.93	0.03		AA	82NAD 02
7.4	0.4		ITNA	84GLA 02	1.94	0.11		TCGS	85VOG 01
7.5	0.4	17	ITNA	84KYL 01	1.96	0.02		AA	82GLA 02
7.6	0.2	35	NAA	81GLA 04	1.97	0.04		TCGS	79FAI 01
7.6	0.2		ITNA	85VOG 01	1.97	0.04	D	TCGS	80AND 01
7.6	0.3		ITNA	84SUZ 02	1.99	0.03	35	IENA	80GLA 03
7.78	0.85		ITNA	80GAR 01	2.09	0.08		ICPES	85HAR 01
7.8	0.2	35	IENA	80GLA 03	2.29		6	EXRF	84JEN 01
					2.31		6	EXRF	84JEN 01
<u>Hg (ng/g)</u>					<u>K-40 (pCi/g)</u>				
150	10		CVAA	82GLA 02	13.9	0.4		GAMMA	84ROS 03
151	12		CVAA	82DOO 01					
192	8		ICPMS	86SCI 02					
<u>Ho (ug/g)</u>					<u>La (ug/g)</u>				
2.9	0.4		ITNA	84SUZ 02	62	2		ITNA	82SUZ 02
					66	2		ITNA	84SUZ 02
					79			ITNA	84GLA 02
<u>I (ug/g)</u>					79.4	1.3	17	ITNA	84KYL 01
<	4.5		ITNA	84SUZ 02	79.9	0.4	17	ITNA	84KYL 01
<	5	L	ITNA	82SUZ 02	81	1		ITNA	82GLA 02
<u>In (ng/g)</u>					83	4	35	ITNA	81GLA 04
151	16		ITNA	82SUZ 02	83.8	1		ITNA	85SUN 01
160	10		FAA	85XIA 02	84	2		ITNA	82GRA 01
160	30		ITNA	83OBR 01	84	6	35	IENA	80GLA 03
<u>K (%)</u>					87.9	7		ITNA	83OBR 01
1.7	0.06		ICPES	84NAD 01	89	5		ITNA	85FIL 01
1.71	0.09		CPXRF	84AHL 01	90.2	0.9		ITNA	85VOG 01
1.77	0.23		ITNA	85FIL 01	93	2		ICPES	85HAR 01
1.8	0.07		CPXRF	80KIR 01	100	23		ITNA	80GAR 01
1.82			ITNA	84GLA 02	<u>Li (ug/g)</u>				
1.84	0.14		ITNA	80GAR 01	100			OES	83MIL 01
1.85	0.02		ICPMS	86SCI 02	151	15		ICPES	84BOT 01
1.85	0.02		AA	82HAR 01	187	6		ICPES	84NAD 01
1.85	0.05		ITNA	85SUN 01	221			CPAA	83BIR 01
1.86	0.06		ICPES	84BOT 01					
1.86	0.089		ITNA	83OBR 01					
1.86	0.12		ITNA	82SUZ 02					
1.87	0.02	16	EXRF	82PEL 01					

TABLE 1633A-2: INDIVIDUAL DATA FOR NBS SRM 1633A (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Lu (ug/g)</u>					<u>Mn (ug/g) cont.</u>				
0.93	0.09		ITNA	80GAR 01	230			ICPES	82NAD 02
0.97	0.25		ITNA	82GLA 02	260	20	35	IENA	80GLA 03
0.99	0.02	17	ITNA	84KYL 01	277	7		ITNA	84GLA 02
1.04	0.07		ITNA	85SUN 01	1000		6	EXRF	84JEN 01
1.06	0.13		ITNA	84GLA 11	1010		6	EXRF	84JEN 01
1.17	0.03	17	ITNA	84KYL 01					
1.33	0.1		ITNA	84SUZ 02	<u>Mo (ug/g)</u>				
1.44	0.12		ITNA	82SUZ 02	26	3		CPXRF	84AHL 01
<u>Mg (ug/g)</u>					27	6		ITNA	82SUZ 02
1400	200		AA	82HAR 01	28.8	2.3		RTNA	84MOK 02
3800	700		CPXRF	80KIR 01	29.2	0.6		ICPMS	86SCI 02
3900	200		ICPES	84NAD 01	30	4.2		CPXRF	80KIR 01
4200			AA	82GLA 02	31.3	3.6		ITNA	85VOG 01
4440	40		ICPMS	86SCI 02	32	2		ICPES	84BOT 01
4500	500		ITNA	80GAR 01	36	1	35	IENA	80GLA 03
4520	80		ICPES	84BOT 01	<u>Na (ug/g)</u>				
4590	30		AA	82NAD 02	1484			ICPES	85PEA 01
4600	70		ICPES	82NAD 02	1560	70		AA	82NAD 02
4660	50		ICPES	85HAR 01	1600	100		AA	82HAR 01
4710	80	11	ICPES	85SAT 01	1670	20		ICPMS	86SCI 02
4760	200	11	ICPES	85SAT 01	1680	90		ITNA	83OBR 01
4800			CPAA	83BIR 01	1700	70		ICPES	82NAD 02
4824			ICPES	85PEA 01	1720	50		ITNA	80GAR 01
5700			ITNA	85GAU 04	1730	10		ITNA	84GLA 02
6200	500		IENA	85GLA 02	1740	70		ITNA	85VOG 01
8000	1300		ITNA	82SUZ 02	1740	100	35	ITNA	81GLA 04
<u>Mn (ug/g)</u>					1750	50		ITNA	82SUZ 02
167	7		ITNA	85FIL 01	1760			ITNA	82GLA 02
167	9		AA	82HAR 01	1760	60		ICPES	85HAR 01
170	24		ITNA	82SUZ 02	1760	80		ICPES	84BOT 01
173	5		ICPES	85HAR 01	1769			CPAA	83BIR 01
180		11	ICPES	85SAT 01	1770	50		ITNA	85SUN 01
181	9		ITNA	85SUN 01	1770	80		ITNA	85GAU 04
182			ITNA	85GAU 04	1800	100		ICPES	84NAD 01
182	3	35	ITNA	81GLA 02	1800	100	35	ITNA	81GLA 02
184	7		ICPES	84NAD 01	1900	70	17	ITNA	84KYL 01
185	11		ITNA	83OBR 01	2020	400		ITNA	82SCH 05
188	1	11	ICPES	85SAT 01	2100	600		TCGS	79FAI 01
189	2		ITNA	85VOG 01	2100	600	D	TCGS	80AND 01
189	5		ICPES	84BOT 01	2200	600		CPXRF	80KIR 01
190	15	D	TCGS	80AND 01	<u>Nb (ug/g)</u>				
190	15		TCGS	79FAI 01	24	3		CPXRF	84AHL 01
191	4		ITNA	80GAR 01	31.5	2		WXRF	84KYL 01
195	15		CPXRF	80KIR 01					
200	56		CPXRF	84AHL 01					
206	7		ICPMS	86SCI 02					
210	50	35	ITNA	81GLA 04					

TABLE 1633A-2: INDIVIDUAL DATA FOR NBS SRM 1633A (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Nd (ug/g)</u>					<u>Pb (ug/g) cont.</u>				
65.6	5.4		TCGS	79FAI 01	72		6	EXRF	84JEN 01
66	5		TCGS	80AND 01	72	3		POT	84PIN 01
71	3	35	IENA	80GLA 03	72.4			AA	84TER 01
77.3	8.9		ITNA	85SUN 01	73		6	EXRF	84JEN 01
89	5		ITNA	84SUZ 02	74	4	13	ICPES	84BOT 01
113	7	12	ITNA	82SUZ 02	75	5		CPXRF	84AHL 01
122	13	12	ITNA	82SUZ 02	75.1	1		WXRF	84KYL 01
					75.8			EXRF	84PIN 01
					75.9			ICPES	85NAR 02
<u>Ni (ug/g)</u>					<u>Pb-210 (pCi/g)</u>				
92	8		CPXRF	84AHL 01	3.4	0.6		GAMMA	84ROS 03
97	36		ITNA	85FIL 01	3.9	0.6		NM	84ROS 03
105		6	EXRF	84JEN 01					
106		6	EXRF	84JEN 01					
112	4.8		CPXRF	80KIR 01					
117	6	35	IENA	80GLA 03					
119	2		ICPES	84BOT 01					
124			VOLT	84BRA 01					
127	5		ICPES	85HAR 01					
128	6	12	ITNA	82SUZ 02					
132	4		ICPMS	86SCI 02					
133	2.1		COLOR	84KAT 01					
133	4	11	ICPES	85SAT 01					
134	0.6		AA	84KAT 01					
138	2		WXRF	84KYL 01					
139	7	12	ITNA	82SUZ 02					
140		11	ICPES	85SAT 01					
<u>O (%)</u>					<u>Po-210 (pCi/g)</u>				
47.66	0.36	34	14NAA	80KHA 02	3.75	0.15		RAS	84ROS 03
<u>P (ug/g)</u>					<u>Pr (ug/g)</u>				
760	10		ICPES	85HAR 01	17.9	1.7	12	ITNA	82SUZ 02
1320	30		ICPES	84BOT 01	18.9	1.1	12	ITNA	82SUZ 02
1400	40		ICPES	84NAD 01					
1700			XRF	81TUR 01					
1744			ICPES	85PEA 01					
1800	300		ICPES	82NAD 02					
1840	120		ICPMS	86SCI 02					
2000			AA	82NAD 02					
<u>Pb (ug/g)</u>					<u>Ra-226 (pCi/g)</u>				
51	12	13	ICPES	84BOT 01	3.2	0.2		GAMMA	84ROS 03
60	10		ICPES	85HAR 01					
64	13		ICPES	84NAD 01					
65	5.7		CPXRF	80KIR 01					
70.4	1.2		ICPMS	86SCI 02					
71.8	0.6		IDMS	83BRO 01					
					<u>Rb (ug/g)</u>				
					121	7		CPXRF	84AHL 01
					124	4	12	ITNA	82SUZ 02
					130	26		ITNA	80GAR 01
					134	8		ITNA	84GLA 02
					134	16	35	NAA	81GLA 04
					135		6	EXRF	84JEN 01
					136		6	EXRF	84JEN 01
					138	8	12	ITNA	82SUZ 02
					140	8		ITNA	85SUN 01
					140.7	2		WXRF	84KYL 01
					147	8	35	ITNA	81GLA 02
					150	12		CPXRF	80KIR 01
					163	2	35	IENA	80GLA 03
					170	31		ITNA	85FIL 01
					<u>S (ug/g)</u>				
					1200			ICPES	85PEA 01
					1350	90		ICPMS	86SCI 02
					2300	200		CPXRF	84AHL 01
					2700	200	D	TCGS	80AND 01
					2700	200		TCGS	79FAI 01

TABLE 1633A-2: INDIVIDUAL DATA FOR NBS SRM 1633A (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>S-32/34 (ratio)</u>					<u>Se (ug/g) cont.</u>				
22.641			IDMS	84KEL 01	9.4	0.3	35	RTNA	81GLA 01
					9.4	0.5		RTNA	81SLO 01
<u>S-33/34 (ratio)</u>					9.5	1.2		CPXRF	84AHL 01
0.1781			IDMS	84KEL 01	9.8	0.5		HAA	85YAM 01
<u>Sb (ug/g)</u>					10	2	35	IENA	80GLA 03
4.2		11	HAA	82CRO 03	10.2	0.6	9	ITNA	82SUZ 02
4.8			AF	85NAR 02	10.4	5.4		ICPES	84BOT 01
6.3	0.2		ITNA	82SUZ 02	10.6			ICPES	85NAR 02
6.3	0.5	17	ITNA	84KYL 01	10.62	0.09		HAA	85CHA 01
6.4	0.4	17	ITNA	84KYL 01	10.7	0.8	35	NAA	81GLA 04
6.5		11	HAA	82CRO 03	10.8	0.3	D	HAA	84IMA 03
6.5	0.4		HAA	85YAM 01	10.8	0.3	7	HAA	84IMA 01
6.6			ITNA	82GLA 02	12	5		ICPMS	86SCI 02
6.88	0.28		ICPMS	86SCI 02	12.7	1.3		ITNA	84SUZ 02
6.9	0.3		ITNA	85VOG 01	13	3		ITNA	85FIL 01
6.9	0.7		ITNA	85FIL 01	<u>Si (%)</u>				
6.95	0.22	35	ITNA	81GLA 02	18	0.93		CPXRF	80KIR 01
7.3	0.2		RTNA	81SLO 01	18.5	1.1		ICPES	84NAD 01
7.49	0.39		ITNA	85SUN 01	20.4	1.1		CPXRF	84AHL 01
7.7	0.5	35	IENA	80GLA 03	21	2		TCGS	85VOG 01
7.8	1.5		ITNA	80GAR 01	22.16	0.29		ICPMS	86SCI 02
8.96			HAA	84TER 04	22.2	0.4		TCGS	79FAI 01
10.1	3.1	13	ICPES	84BOT 01	22.2	0.4	D	TCGS	80AND 01
<u>Sc (ug/g)</u>					22.4		6	EXRF	84JEN 01
34	1		ITNA	82SUZ 02	22.5		6	EXRF	84JEN 01
34	4.2		CPXRF	80KIR 01	22.9764	0.0934		ICPES	85PEA 01
36			ITNA	82GLA 02	23	0.2	16	EXRF	82PEL 01
37	2		ITNA	85FIL 01	23.13	0.2	16	EXRF	82PEL 01
38.8	0.7	17	ITNA	84KYL 01	23.16	0.2	16	EXRF	82PEL 01
38.9	0.6		ITNA	85SUN 01	23.37	0.23		ICPES	82NAD 02
39	2		ITNA	84GLA 02	23.5	0.2	11	ICPES	85SAT 01
39.8	0.8	17	ITNA	84KYL 01	23.9	0.5		AA	82GLA 02
40	1	35	ITNA	81GLA 02	23.9	0.5	35	IENA	80GLA 03
40.3	0.8		ICPES	85HAR 01	24	0.3	11	ICPES	85SAT 01
40.3	0.8		ITNA	85VOG 01	24.2	0.8		AA	82NAD 02
40.6	1.3		ITNA	80GAR 01	<u>Sm (ug/g)</u>				
41	2	35	ITNA	81GLA 04	14.5	1.3	35	ITNA	81GLA 04
43	1	35	IENA	80GLA 03	15	1		ITNA	85FIL 01
<u>Se (ug/g)</u>					16	0.2		TCGS	79FAI 01
6.2			AF	85NAR 02	16	0.2	D	TCGS	80AND 01
7		6	EXRF	84JEN 01	16.1	1.5	4	TCGS	85GLA 05
7		6	EXRF	84JEN 01	16.2	1.5	4	TCGS	85GLA 05
7.8	2.1		CPXRF	80KIR 01	16.3	0.5		ITNA	85SUN 01
8.8	0.4	9	ITNA	82SUZ 02	16.4	0.1		ITNA	82GLA 02
					16.6	0.3		ITNA	85VOG 01
					16.7			ITNA	84GLA 02
					16.9	0.5		TCGS	85VOG 01

TABLE 1633A-2: INDIVIDUAL DATA FOR NBS SRM 1633A (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Sm (ug/g) cont.</u>					<u>Tb (ug/g)</u>				
17	0.3	17	ITNA	84KYL 01	2.1	0.1		ITNA	82SUZ 02
17.1	0.2	17	ITNA	84KYL 01	2.1	0.2		ITNA	84GLA 02
18.8	0.6		ITNA	83OBR 01	2.2	0.1		ITNA	84SUZ 02
19.4	0.7		ITNA	82SUZ 02	2.3	0.7		ITNA	80GAR 01
20	4.4		ITNA	80GAR 01	2.5	0.1	17	ITNA	84KYL 01
21	1		ITNA	84SUZ 02	2.6	0.1	17	ITNA	84KYL 01
					2.75	0.18		ITNA	85SUN 01
					2.8	0.5	35	NAA	81GLA 04
					2.9	0.1	35	IENA	80GLA 03
					4.7	1.7		ITNA	85FIL 01
<u>Sn (ug/g)</u>					<u>Te (ug/g)</u>				
3.96	0.12		ICPMS	86SCI 02	<	3.5		ITNA	84SUZ 02
6.3	0.2		FAA	84LOW 01	<	6.6	L	ITNA	82SUZ 02
6.36	0.15		FAA	85TER 01					
14.8			AF	85NAR 02					
18.5			ICPES	85NAR 02					
<u>Sr (ug/g)</u>					<u>Th (ug/g)</u>				
717	26		ICPES	84NAD 01	11		6	EXRF	84JEN 01
740	20	5	IENA	80GLA 03	11		6	EXRF	84JEN 01
742	23		ITNA	85SUN 01	18	3		CPXRF	84AHL 01
750	40		CPXRF	84AHL 01	22.4			ITNA	82GLA 02
770		35	IENA	81GLA 04	23.2	0.8		ICPMS	86SCI 02
790	30		ICPES	84BOT 01	24	2		ITNA	85FIL 01
790	79		ITNA	85FIL 01	24.3	3.8	12	ITNA	82SUZ 02
813	70		ITNA	83OBR 01	24.6	0.9	35	NAA	81GLA 04
815	7		IENA	84GLA 02	24.6	1.1	35	ITNA	81GLA 02
815	10	11	ICPES	85SAT 01	24.7	1.2		ITNA	85VOG 01
819	54		ITNA	80GAR 01	24.7	1.4	17	ITNA	84KYL 01
825	40		CPXRF	80KIR 01	24.8	0.5		ITNA	84GLA 02
829	22		IENA	84GLA 11	24.8	1.6		ITNA	80GAR 01
834.5	2		WXRF	84KYL 01	25	0.7		ITNA	84SUZ 02
840	10		ICPES	85HAR 01	25	1	35	IENA	80GLA 03
840	30	5	IENA	80GLA 03	25.6	1	17	ITNA	84KYL 01
840	40	12	ITNA	82SUZ 02	25.6	2.8		ITNA	86GAU 01
850	70	12	ITNA	82SUZ 02	26	0.4		ITNA	85SUN 01
882		6	EXRF	84JEN 01	26	1.3	12	ITNA	82SUZ 02
890		6	EXRF	84JEN 01	27.9	1		WXRF	84KYL 01
					28	8.3		CPXRF	80KIR 01
<u>Ta (ug/g)</u>					<u>Th-232 (pCi/g)</u>				
1.71	0.05		ITNA	82SUZ 02	2.4	0.2		GAMMA	84ROS 03
1.8	0.07		ITNA	84SUZ 02					
1.8	0.1		ITNA	84GLA 02					
1.8	0.12	35	ITNA	81GLA 02					
1.8	0.2	35	NAA	81GLA 04					
1.94			ITNA	82GLA 02					
2.0	0.1	17	ITNA	84KYL 01					
2.0	0.5		ITNA	80GAR 01					
2.1	0.2	35	IENA	80GLA 03					
2.11	0.16		ITNA	85SUN 01					
2.3	0.1	17	ITNA	84KYL 01					
2.3	0.2		ITNA	85FIL 01					

TABLE 1633A-2: INDIVIDUAL DATA FOR NBS SRM 1633A (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ti (ug/g)</u>					<u>U (ug/g) cont.</u>				
6660		6	EXRF	84JEN 01	10.3	0.4		ITNA	82SUZ 02
6700	200		ICPES	84NAD 01	10.3	0.4		DNA	84GLA 11
6710		6	EXRF	84JEN 01	10.4	0.1		DNA	85GLA 04
7400	200	16	EXRF	82PEL 01	10.4	0.3	17	DNA	82CON 01
7700	300		ICPES	84BOT 01	10.4	0.5		ITNA	85VOG 01
7800	300		ITNA	82SUZ 02	10.4	0.8		DNA	84GLA 02
7880	540		ITNA	83OBR 01	10.47	0.09	35	DNA	80GLA 01
7940	90	11	ICPES	85SAT 01	10.47	0.15		DNA	86GAU 01
8000	40		ICPMS	86SCI 02	10.6	0.4	35	NAA	81GLA 04
8000	600	35	NAA	81GLA 04	10.7	0.3	17	DNA	82CON 01
8000	800		CPXRF	80KIR 01	11	2.7		CPXRF	80KIR 01
8060	370		ITNA	80GAR 01	<u>U-238 (pCi/g)</u>				
8100	100		ICPES	85HAR 01	3.6	0.3		GAMMA	84ROS 03
8200	700	35	ITNA	81GLA 02	<u>V (ug/g)</u>				
8300			ITNA	84GLA 02	206	56		CPXRF	84AHL 01
8300	500		CPXRF	84AHL 01	271	14		ITNA	85SUN 01
8320	70		ITNA	85VOG 01	277	5	11	ICPES	85SAT 01
8386			ICPES	85PEA 01	279	8		ICPES	84NAD 01
8400	60		ICPES	82NAD 02	280			ICPES	81WAL 01
8400	100	35	IENA	80GLA 03	280	18		CPXRF	80KIR 01
8400	100	D	TCGS	80AND 01	288	20		ITNA	83OBR 01
8400	100	16	EXRF	82PEL 01	289	3		ITNA	85VOG 01
8400	100	16	EXRF	82PEL 01	290	20		ITNA	82SUZ 02
8400	100		TCGS	79FAI 01	290	20	35	IENA	80GLA 03
8600	500		TCGS	85VOG 01	292	16	35	ITNA	81GLA 02
8855	830		ITNA	85SUN 01	294	28	35	ITNA	81GLA 04
9000			AA	82NAD 02	295	5		ICPES	85HAR 01
9000	1440		ITNA	85FIL 01	301	8		ITNA	80GAR 01
<u>Tl (ug/g)</u>					304	5	11	ICPES	85SAT 01
4.4	1.3		CPXRF	80KIR 01	305	5		ICPES	84BOT 01
5.7	0.2		ICPMS	86SCI 02	324	16		ICPMS	86SCI 02
5.7	0.7		IENA	85RUC 01	344	30		ITNA	85FIL 01
<u>Im (ug/g)</u>					360	40		TCGS	79FAI 01
2.4	0.1		ITNA	84SUZ 02	360	40	D	TCGS	80AND 01
<u>U (ug/g)</u>					<u>W (ug/g)</u>				
8.9	0.7		ITNA	85FIL 01	4.71	0.37		ITNA	85SUN 01
9.66	0.25		ITNA	85SUN 01	5.4	0.4	35	IENA	80GLA 03
9.7	0.8		ITNA	84SUZ 02	5.4	0.4	D	NAA	81GLA 04
9.83	0.9		IENA	83OBR 01	5.4	0.8		ITNA	83OBR 01
10.2	0.02		ICPMS	86SCI 02	5.9	0.4		ITNA	82SUZ 02
10.2	0.1	35	IENA	80GLA 03	6.4	0.6		ITNA	84SUZ 02
10.2	0.2		DNA	80GAR 01	6.9	1.2		RENA	82GLA 02
10.2	0.3		DNA	82GLA 02					
10.2	0.8		FLUOR	86KAN 01					
10.3	0.2		DNA	85GAU 04					

TABLE 1633A-2: INDIVIDUAL DATA FOR NBS SRM 1633A (cont.)

Conc	Uncer	Com	Method	Reference	
<u>Y (ug/g)</u>					
74	5		CPXRF	84AHL 01	
81		6	EXRF	84JEN 01	
82		6	EXRF	84JEN 01	
89	4		ICPES	85HAR 01	
101.4	1		WXRF	84KYL 01	
<u>Yb (ug/g)</u>					
6.02	0.26		ITNA	85SUN 01	
6.9	0.3		ITNA	82SUZ 02	
7.2	0.3		ITNA	84GLA 11	
7.5	0.2	17	ITNA	84KYL 01	
7.5	0.3	17	ITNA	84KYL 01	
7.5	0.5		ITNA	82GLA 02	
8.2		35	ITNA	81GLA 04	
8.3	0.7		ITNA	84SUZ 02	
10	1.8		ITNA	80GAR 01	
<u>Zn (ug/g)</u>					
189		6	AF	84NAR 02	
191			ICPES	85NAR 02	
191		6	AF	84NAR 02	
196			AF	85NAR 02	
201	11		CPXRF	84AHL 01	
218	18		CPXRF	80KIR 01	
220	10		ICPES	84BOT 01	
220	50		ITNA	80GAR 01	
222	7	5	IENA	80GLA 03	
225	32		AA	82HAR 01	
226	19		ICPES	84NAD 01	
230			AA	82GLA 02	
230	8		ICPMS	86SCI 02	
233	3	11	ICPES	85SAT 01	
235		6	EXRF	84JEN 01	
237		6	EXRF	84JEN 01	
243	10	11	ICPES	85SAT 01	
245	3		ICPES	85HAR 01	
250	20	12	ITNA	82SUZ 02	
250	30	12	ITNA	82SUZ 02	
256	12	5	IENA	80GLA 03	
263	2		WXRF	84KYL 01	
<u>Zr (ug/g)</u>					
220	13		CPXRF	84AHL 01	
262.1	1.5		WXRF	84KYL 01	
300	30	5	IENA	80GLA 03	
370	50	5	IENA	80GLA 03	
400	50	12	ITNA	82SUZ 02	
410	40	12	ITNA	82SUZ 02	

TABLE 1634-1: COMPILED DATA FOR NBS SRM 1634 TRACE METALS IN FUEL OIL (revised 3/1/86)

ELEMENT	UNITS	NBS		CONSENSUS		MEDIAN	RANGE	AA		NAA		ICPES		OTHER METHODS	
		Mean \pm SD	(n)	Mean \pm SD	(n)			Mean	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n) Method
As	ng/g	95	(5)	70 \pm 15	(5)	63	56 - 95	---	---	70 \pm 15	(5)	---	---	---	
Au	ng/g	---	(1)	24.5	(1)	---	---	---	---	24.5	(1)	---	---	---	
Be	ng/g	< 10		---		---	---	---	---	---		---	---	---	
Br	ng/g	---	(4)	39.8 \pm 0.9	(4)	39.1	39 - 41	---	---	40 \pm 1	(3)	---	---	---	
Ca	ug/g	---	(1)	15	(1)	---	---	---	---	15	(1)	---	---	---	
Cd	ng/g	< 10	(1)	5	(1)	---	---	5	(1)	---		---	---	---	
Cl	ug/g	---	(3)	8.1 \pm 0.3	(3)	8	7.8 - 8.4	---	---	8.2	(2)	---	---	---	
Co	ng/g	---	(6)	310 \pm 50	(6)	301	250 - 400	---	---	320 \pm 50	(5)	---	---	---	
Cr	ng/g	90	(4)	97 \pm 15	(4)	93	80 - 116	---	---	97 \pm 15	(4)	---	---	---	
Cu	ng/g	---	(1)	220	(1)	---	---	---	---	220	(1)	---	---	---	
Eu	ng/g	---	(1)	11	(1)	---	---	---	---	11	(1)	---	---	---	
Fe	ug/g	13.5 \pm 1.0	(17)	14 \pm 2	(17)	14.1	10.8 - 20	14.1	(1)	19 \pm 6	(6)	15 \pm 4	(3)	14 \pm 2	(7) XRF
Fe	ug/g	---		---		---	---	---	---	---		---	---	12.3	(1) POL
Hg	ng/g	2.3	(2)	2.3	(2)	---	2.3 - 2.3	---	---	2.3	(2)	---	---	---	
K	ug/g	---	(1)	315	(1)	---	---	---	---	315	(1)	---	---	---	
Mn	ng/g	120	(4)	200 \pm 90	(4)	190	110 - 320	---	---	200 \pm 90	(4)	---	---	---	
Mo	ng/g	---	(1)	870	(1)	---	---	---	---	870	(1)	---	---	---	
Na	ug/g	---	(5)	12 \pm 2	(5)	12	11.2 - 15.3	---	---	12.9 \pm 1.8	(4)	---	---	---	
Ni	ug/g	36 \pm 4	(20)	35.4 \pm 2.5	(20)	35.2	31.1 - 39.5	31.1	(1)	37 \pm 3	(4)	35.6 \pm 1.0	(3)	34 \pm 2	(7) XRF
Ni	ug/g	---		---		---	---	---	---	---		---	---	38.13 \pm 0.06	(3) IDMS
Ni	ug/g	---		---		---	---	---	---	---		---	---	35.2	(1) POL
Pb	ng/g	41 \pm 5	(2)	45.5	(2)	---	41 - 50	50	(1)	---		---	---	41	(1) POL
S	%	2.14 \pm 0.02	(10)	2.13 \pm 0.11	(10)	2.15	2 - 2.3	---	---	2.19 \pm 0.14	(3)	2.20	(2)	2.17	(1) XRF
S	%	---		---		---	---	---	---	---		---	---	2.00	(1) MECA
S	%	---		---		---	---	---	---	---		---	---	2.00	(1) TITR
S	%	---		---		---	---	---	---	---		---	---	2.15	(1) IC
Sb	ng/g	---	(3)	11 \pm 2	(3)	10	10 - 14	---	---	11 \pm 2	(3)	---	---	---	
Sc	ug/g	---	(1)	1.38	(1)	---	---	---	---	1.38	(1)	---	---	---	
Se	ng/g	---	(5)	170 \pm 26	(5)	170	138 - 200	---	---	170 \pm 26	(5)	---	---	---	
V	ug/g	320 \pm 15	(17)	312 \pm 11	(17)	311	283 - 326	326	(1)	299 \pm 20	(5)	318 \pm 4	(3)	309 \pm 14	(7) XRF
V	ug/g	---		---		---	---	---	---	---		---	---	317	(1) GC
Zn	ug/g	0.23 \pm 0.05	(3)	0.32 \pm 0.16	(3)	0.3	0.17 - 0.48	---	---	0.32 \pm 0.16	(3)	---	---	---	

TABLE 1634-2: INDIVIDUAL DATA FOR NBS SRM 1634 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>As (ng/g)</u>					<u>Cu (ng/g)</u>				
56			ITNA	77FIL 01	<	800	L	EXRF	79GIA 01
62	13		ITNA	85FIL 02	220	20		ITNA	73SHE 01
63	3		ITNA	78BER 02	<u>Eu (ng/g)</u>				
70			ITNA	78WEA 01	11	4		ITNA	85FIL 02
95			RTNA	74ORV 01	<u>Fe (ug/g)</u>				
120			ITNA	81SHA 01	10.8	3.3	32	EXRF	78KUB 01
<u>Au (ng/g)</u>					12.3			POL	74MAI 01
24.5	0.7		ITNA	73SHE 01	12.4	1.6		ITNA	73SHE 01
<u>Br (ng/g)</u>					12.5	2.2		UU	77PAC 01
39			ITNA	77FIL 01	12.7	3		EXRF	80SCH 07
39.1	5.3		UU	77PAC 01	13			ICPES	79MER 01
40			ITNA	78WEA 01	13.4	0.2		ICPES	83BRO 02
41	4		ITNA	78BER 02	13.5	1.2		ITNA	81SHA 01
240	70		ITNA	73SHE 01	14	1.5		EXRF	79GIA 01
330	90		ITNA	85FIL 02	14.1	0.6		AA	74RAI 01
<u>Ca (ug/g)</u>					14.2	1.5		ITNA	78BER 02
15	2		ITNA	73SHE 01	14.4	1.7	32	EXRF	78KUB 01
<u>Cd (ng/g)</u>					15.1	2.4	32	EXRF	78KUB 01
<	10	L	RTNA	74ORV 01	16.2	2.8	32	EXRF	78KUB 01
5			FAA	74RAI 01	16.9	2.5	32	EXRF	78KUB 01
<u>Cl (ug/g)</u>					20			ITNA	77FIL 01
7.8	0.5		UU	77PAC 01	20	2		ICPES	84BAR 03
8			ITNA	78WEA 01	25			ITNA	78WEA 01
8.4	0.5		ITNA	78BER 02	27.5	6.5		ITNA	85FIL 02
18	0.7		ITNA	73SHE 01	<u>Hg (ng/g)</u>				
<u>Co (ng/g)</u>					<	10	L	ITNA	81SHA 01
250	10		ITNA	73SHE 01	<	10		ITNA	77FIL 01
301			ITNA	77FIL 01	2.3	0.2		RTNA	84DEL 01
301	14		UU	77PAC 01	2.3	0.2		RTNA	74ORV 01
310	15		ITNA	78BER 02	22	15		ITNA	73SHE 01
330	60		ITNA	85FIL 02	<u>K (ug/g)</u>				
400			ITNA	78WEA 01	315			ITNA	77FIL 01
<u>Cr (ng/g)</u>					<u>Mn (ng/g)</u>				
80			ITNA	81SHA 01	110	10		ITNA	78BER 02
93			ITNA	77FIL 01	190			ITNA	73SHE 01
100			ITNA	78WEA 01	200			ITNA	81SHA 01
116	35		ITNA	73SHE 01	320			ITNA	78WEA 01
220	60		ITNA	85FIL 02	<u>Mo (ng/g)</u>				
					870	80		ITNA	78BER 02

TABLE 1634-2: INDIVIDUAL DATA FOR NBS SRM 1634 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Na (ug/g)</u>					<u>Sb (ng/g)</u>				
11.2			ITNA	77FIL 01	10			ITNA	77FIL 01
11.2	0.7		UU	77PAC 01	10			ITNA	78WEA 01
12			ITNA	78WEA 01	14	3		ITNA	73SHE 01
13.2	1.5		ITNA	78BER 02	90	110		ITNA	85FIL 02
15.3	1.9		ITNA	85FIL 02	<u>Sc (ug/g)</u>				
<u>Ni (ug/g)</u>					1.38	0.76		ITNA	85FIL 02
31.1	2.1		AA	74RAI 01	<u>Se (ng/g)</u>				
32	1	32	EXRF	78KUB 01	138	60		RTNA	74ORV 01
32	1.6		EXRF	79GIA 01	151	58		ITNA	85FIL 02
32	2	32	EXRF	78KUB 01	170			ITNA	77FIL 01
33	1	32	EXRF	78KUB 01	190	30		ITNA	73SHE 01
33	2.3		ITNA	85FIL 02	200			ITNA	78WEA 01
35	0.3		ICPES	83BRO 02	<u>V (ug/g)</u>				
35	2		ICPES	84BAR 03	266	18		ITNA	73SHE 01
35	2	32	EXRF	78KUB 01	283	12		EXRF	79GIA 01
35.2			POL	74MAI 01	300			ITNA	81SHA 01
36	1	32	EXRF	78KUB 01	301	15		ITNA	85FIL 02
36.7			ICPES	79MER 01	303	18	32	EXRF	78KUB 01
36.9	2.7		EXRF	80SCH 07	306	24		EXRF	80SCH 07
37	2		ITNA	78BER 02	310			ITNA	78WEA 01
37.4			ITNA	77FIL 01	310	5	32	EXRF	78KUB 01
37.4	1.5		UU	77PAC 01	311	7	32	EXRF	78KUB 01
38.1		6	IDMS	74MOO 01	312	16.4		UU	77PAC 01
38.1		6	IDMS	74MOO 01	314			ICPES	79MER 01
38.2		6	IDMS	74MOO 01	317	6		GC	81DIL 01
39.5	2.26		ITNA	73SHE 01	318			ICPES	84BAR 03
<u>Pb (ng/g)</u>					318	15		ITNA	78BER 02
< 500			ICPES	79MER 01	323	4		ICPES	83BRO 02
< 1500		L	EXRF	79GIA 01	323	9	32	EXRF	78KUB 01
41			POL	74MAI 01	325	11	32	EXRF	78KUB 01
50			FAA	74RAI 01	326	6.8		AA	74RAI 01
<u>S (%)</u>					<u>Zn (ug/g)</u>				
2	0.1		TITR	80MCC 01	<	0.6		ICPES	79MER 01
2	0.2		MECA	80MCC 01	<	0.6	L	EXRF	79GIA 01
2.04	0.39		ITNA	73SHE 01	<	1	L	ITNA	81SHA 01
2.05	0.4		UU	77PAC 01	0.17	0.02		RTNA	74ORV 01
2.15	0.02		ICPES	84BAR 03	0.3			ITNA	78WEA 01
2.154	0.009		IC	80MCC 01	0.48	0.12		ITNA	73SHE 01
2.17			XRF	80MCC 01	1.0	0.4		ITNA	85FIL 02
2.24	0.05		ITNA	81SHA 01					
2.24	0.05		ICPES	81WAL 02					
2.3	0.3		ITNA	78BER 02					

TABLE 1634A-1: COMPILED DATA FOR NBS SRM 1634A TRACE METALS IN FUEL OIL (revised 3/1/86)

ELEMENT	UNITS	NBS		CONSENSUS		MEDIAN	RANGE	NAA		ICPES		XRF	OTHER METHODS	
		Mean \pm SD	SD (n)	Mean \pm SD	SD (n)			Mean (n)	SD (n)	Mean \pm SD	SD (n)	Mean (n)	Mean (n)	Method
As	ng/g	120		141	(1)	---	---	141	(1)	---	---	---	---	
Ba	ug/g	---		5.98	(1)	---	---	5.98	(1)	---	---	---	---	
Be	ng/g	6		---		---	---	---		---	---	---	---	
Br	ug/g	< 1		0.88	(1)	---	---	0.88	(1)	---	---	---	---	
Ca	ug/g	16		16.8	(2)	---	16 - 17.5	---		16	(1)	17.5	(1)	
Cd	ng/g	2		---		---	---	---		---	---	---	---	
Ce	ng/g	---		757	(1)	---	---	757	(1)	---	---	---	---	
Cl	ug/g	31		42	(2)	---	35 - 49.9	42.45	(2)	---	---	---	---	
Co	ng/g	300		440	(2)	---	280 - 600	600	(1)	280	(1)	---	---	
Cr	ug/g	0.7		0.71	(2)	---	0.6 - 0.82	0.82	(1)	0.6	(1)	---	---	
Cs	ng/g	---		22	(1)	---	---	22	(1)	---	---	---	---	
Cu	ug/g	---		< 1		---	---	---		---	---	< 1	---	
Eu	ug/g	---		11.6	(1)	---	---	11.6	(1)	---	---	---	---	
Fe	ug/g	31		32 \pm 6	(5)	30.8	26 - 41	41	(1)	28.4	(2)	30.6	(2)	
Ga	ng/g	---		106	(1)	---	---	106	(1)	---	---	---	---	
Hg	ug/g	< 2		< 1.9		---	---	---		---	---	< 1.9	---	
K	ug/g	---		< 4.5		---	---	---		---	---	< 4.5	---	
La	ug/g	---		2.04	(1)	---	---	2.04	(1)	---	---	---	---	
Mn	ng/g	190 \pm 20		195	(2)	---	180 - 210	---		195	(2)	---	---	
Mo	ng/g	---		110	(1)	---	---	---		110	(1)	---	---	
N	%	---		1.23	(1)	---	---	---		---	---	---	1.23	(1) IC
Na	ug/g	87 \pm 4		102	(1)	---	---	102	(1)	---	---	---	---	
Nd	ug/g	---		0.9	(1)	---	---	0.9	(1)	---	---	---	---	
Ni	ug/g	29 \pm 1		27.5 \pm 1.1	(8)	27	26 - 29.2	26.3	(1)	27.6 \pm 1.0	(4)	28.4	(2)	(1) AA
P	ug/g	---		1090	(1)	---	---	---		---	---	1090	(1)	
Pb	ug/g	2.8 \pm 0.08		2.3 \pm 0.3	(3)	2.13	2.13 - 2.68	---		2.68	(1)	2.13	(2)	
Rb	ng/g	---		< 610		---	---	---		---	---	< 610	---	
S	%	2.85 \pm 0.05		2.86 \pm 0.03	(6)	2.848	2.82 - 2.91	---		2.89	(2)	2.86	(2)	(2) NH
S	%	---		---		---	---	---		---	---	---	2.12	(1) IC
Sb	ng/g	---		34	(1)	---	---	34	(1)	---	---	---	---	
Sc	ug/g	---		2.3	(1)	---	---	2.3	(1)	---	---	---	---	
Se	ng/g	150 \pm 20		190	(1)	---	---	190	(1)	---	---	---	---	
Si	ug/g	---		< 270		---	---	---		---	---	< 270	---	
Sm	ug/g	---		43	(1)	---	---	43	(1)	---	---	---	---	
Sr	ug/g	---		< 4.3		---	---	---		---	---	< 4.3	---	
Ti	ug/g	---		< 11		---	---	---		---	---	< 11	---	
V	ug/g	56 \pm 2		55.6 \pm 1.6	(8)	55.5	54 - 58.5	58.5	(1)	56.2 \pm 0.8	(4)	54	(2)	(1) AA
Zn	ug/g	2.7 \pm 0.2		2.83 \pm 0.17	(5)	2.89	2.54 - 3.0	2.89	(1)	2.67	(2)	2.95	(2)	

TABLE 1634A-2: INDIVIDUAL DATA FOR NBS SRM 1634A (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>As (ng/g)</u>					<u>Cu (ug/g)</u>				
<	650	32	EXRF	83SAN 02	<	1	32	EXRF	83SAN 02
<	650	32	EXRF	83SAN 02	<	1	32	EXRF	83SAN 02
141	17		ITNA	85FIL 02					
<u>Ba (ug/g)</u>					<u>Eu (ug/g)</u>				
5.98	1.77		ITNA	85FIL 02	11.6	5.5		ITNA	85FIL 02
<u>Br (ug/g)</u>					<u>Fe (ug/g)</u>				
<	0.5	32	EXRF	83SAN 02	26	4		ICPES	84BAR 03
<	0.5	32	EXRF	83SAN 02	30.4	1.1	32	EXRF	83SAN 02
0.88	0.19		ITNA	85FIL 02	30.8	0.4		ICPES	83MAH 05
					30.8	1.1	32	EXRF	83SAN 02
					41	7.2		ITNA	85FIL 02
<u>Ca (ug/g)</u>					<u>Ga (ng/g)</u>				
<	42	32	EXRF	83SAN 02	<	450	32	EXRF	83SAN 02
16	1		ICPES	84BAR 03	<	450	32	EXRF	83SAN 02
17.5	2.2	32	EXRF	83SAN 02	106	25		ITNA	85FIL 02
<u>Ce (ng/g)</u>					<u>Hg (ug/g)</u>				
757	64		ITNA	85FIL 02	<	1.9	32	EXRF	83SAN 02
<u>Cl (ug/g)</u>					<	1.9	32	EXRF	83SAN 02
<	68	32	EXRF	83SAN 02	<u>K (ug/g)</u>				
<	350	32	EXRF	83SAN 02	<	4.5	32	EXRF	83SAN 02
35			ITNA	86GAU 01	<	66	32	EXRF	83SAN 02
49.9	3.4		ITNA	83LI 01					
<u>Co (ng/g)</u>					<u>La (ug/g)</u>				
<	1400	32	EXRF	83SAN 02	2.04	0.18		ITNA	85FIL 02
<	1400	32	EXRF	83SAN 02					
280	60		ICPES	83MAH 05	<u>Mn (ng/g)</u>				
600	370		ITNA	85FIL 02	<	2600	32	EXRF	83SAN 02
<u>Cr (ug/g)</u>					<	2600	32	EXRF	83SAN 02
<	4.8	32	EXRF	83SAN 02	180	4		ICPES	83MAH 05
<	4.8	32	EXRF	83SAN 02	210			ICPES	85NG 01
0.6			ICPES	85NG 01	<u>Mo (ng/g)</u>				
0.82	0.11		ITNA	85FIL 02	110	3		ICPES	83MAH 05
<u>Cs (ng/g)</u>					<u>N (%)</u>				
22	9		ITNA	85FIL 02	1.23	0.02		IC	83NAD 01

TABLE 1634A-2: INDIVIDUAL DATA FOR NBS SRM 1634A (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Na (ug/g)</u>					<u>Sc (ug/g)</u>				
102	16		ITNA	85FIL 02	2.3	1.6		ITNA	85FIL 02
<u>Nd (ug/g)</u>					<u>Se (ng/g)</u>				
0.9	0.26		ITNA	85FIL 02	<	540	32	EXRF	83SAN 02
<u>Ni (ug/g)</u>					<	540	32	EXRF	83SAN 02
26			AA	85FAB 01	190	50		ITNA	85FIL 02
26.3	2.5		ITNA	85FIL 02	<u>Si (ug/g)</u>				
27			ICPES	85NG 01	<	270	32	EXRF	83SAN 02
27	2		ICPES	84BAR 03	<	3000	32	EXRF	83SAN 02
27.3	0.4		ICPES	85FAB 01	<u>Sm (ug/g)</u>				
28.4	1.3	32	EXRF	83SAN 02	43	3.8		ITNA	85FIL 02
28.5	1.3	32	EXRF	83SAN 02	<u>Sr (ug/g)</u>				
29.2	0.5		ICPES	83MAH 05	<	4.3	32	EXRF	83SAN 02
<u>P (ug/g)</u>					<	4.3	32	EXRF	83SAN 02
<	1500	32	EXRF	83SAN 02	<u>Ti (ug/g)</u>				
1090	53	32	EXRF	83SAN 02	<	11	32	EXRF	83SAN 02
<u>Pb (ug/g)</u>					<	11	32	EXRF	83SAN 02
2.13	0.87	32	EXRF	83SAN 02	<u>V (ug/g)</u>				
2.13	0.87	32	EXRF	83SAN 02	54			AA	85FAB 01
2.68	0.03		ICPES	83MAH 05	54	4	32	EXRF	83SAN 02
<u>Rb (ng/g)</u>					54	4	32	EXRF	83SAN 02
<	610	32	EXRF	83SAN 02	55.5			ICPES	85NG 01
<	610	32	EXRF	83SAN 02	55.5	1		ICPES	83MAH 05
<u>S (%)</u>					56.7	0.7		ICPES	85FAB 01
2.12	0.01		IC	83NAD 01	57	2		ICPES	84BAR 03
2.82	0.1	7	NM	83LI 01	58.5	5		ITNA	85FIL 02
2.84	0.08	7	NM	83LI 01	<u>Zn (ug/g)</u>				
2.848	0.09	32	EXRF	83SAN 02	2.54	0.03		ICPES	83MAH 05
2.87	0.02		ICPES	85FAB 01	2.8	0.3		ICPES	84BAR 03
2.881	0.027	32	EXRF	83SAN 02	2.89	0.92		ITNA	85FIL 02
2.91	0.02		ICPES	84BAR 03	2.9	0.5	32	EXRF	83SAN 02
<u>Sb (ng/g)</u>					3	0.5	32	EXRF	83SAN 02
34	31		ITNA	85FIL 02					

TABLE 1634B-1: COMPILED DATA FOR NBS SRM 1634B TRACE ELEMENTS IN FUEL OIL
(revised 3/1/86)

ELEMENT	UNITS	NBS	
		Mean \pm	SD
ASH	ug/g	700	
Al	ug/g	16	
As	ng/g	120 \pm	20
Ba	ug/g	1.3	
Ca	ug/g	15	
Co	ng/g	320 \pm	40
Cr	ug/g	0.7	
Fe	ug/g	31.6 \pm	2.0
HEAT	BTU/lb	18100	
Hg	ng/g	< 1	
Mn	ng/g	230 \pm	30
Na	ug/g	90	
Ni	ug/g	28 \pm	2
Pb	ug/g	2.8	
S	%	2.80 \pm	0.05
Se	ng/g	180 \pm	40
V	ug/g	55.4 \pm	1.1
Zn	ug/g	3.0 \pm	0.2

TABLE 1635-1: COMPILED DATA FOR NBS SRM 1635 TRACE ELEMENTS IN COAL (revised 3/1/86)

ELEMENT	UNITS	NBS		CONSENSUS		MEDIAN	RANGE	AA		NAA		Mean	(n)	Method	OTHER METHODS	
		Mean \pm SD	SD	Mean \pm SD	SD			Mean \pm SD	SD	Mean \pm SD	SD				Mean \pm SD	(n) Method
ASH	%	---		4.65	(2)	---	4.5 - 4.8	---		---		4.8	(1)	CB	---	
Ag	ng/g	---		< 38		---	---	---		< 38		< 2500		XRF	---	
Al	ug/g	3200		2950 \pm 270	(11)	2960	2600 - 3400	2750	(2)	2930 \pm 170	(6)	2976	(2)	ICPES	3400	(1) TCGS
As	ng/g	420 \pm 150		404 \pm 76	(11)	400	280 - 530	360 \pm 56	(5)	460 \pm 60	(5)	---			330	(1) AF
Au	ng/g	---		< 6		---	---	---		< 6		---			---	
B	ug/g	---		115 \pm 17	(3)	105	104.5 - 135	---		135	(1)	---			105	(2) TCGS
Ba	ug/g	---		73 \pm 5	(7)	72	67 - 81	---		72 \pm 4	(6)	81	(1)	XRF	---	
Be	ug/g	---		0.48 \pm 0.02	(3)	0.49	0.46 - 0.49	0.48 \pm 0.02	(3)	---		---			---	
Bi	ug/g	---		< 1		---	---	---		---		< 1		XRF	---	
Br	ug/g	---		1.4 \pm 0.4	(6)	1.22	0.84 - 1.90	---		1.4 \pm 0.4	(6)	---			---	
C	%	---		62.6	(2)	---	59 - 66.23	---		---		66.23	(1)	CB	59	(1) TCGS
Ca	ug/g	---		5350 \pm 340	(11)	5400	4800 - 5834	5600	(2)	5220 \pm 350	(6)	5460	(2)	ICPES	5400	(1) TCGS
Cd	ng/g	30 \pm 10		29	(1)	---	---	---		29	(1)	---			---	
Ce	ug/g	3.6		3.40 \pm 0.14	(6)	3.4	3.2 - 3.60	---		3.40 \pm 0.14	(6)	---			---	
Cl	ug/g	---		26.8 \pm 1.0	(4)	26	26 - 28	---		26.5	(2)	28	(1)	IC	26	(1) TCGS
Co	ng/g	650		621 \pm 19	(9)	620	590 - 650	610	(2)	624 \pm 20	(7)	700	(1)	XRF	---	
Cr	ug/g	2.5 \pm 0.3		2.3 \pm 0.3	(12)	2.48	1.9 - 2.9	2.7 \pm 0.7	(4)	2.3 \pm 0.2	(8)	2	(1)	XRF	---	
Cs	ng/g	---		53 \pm 7	(3)	53	46 - 60	---		53 \pm 7	(3)	---			---	
Cu	ug/g	3.6 \pm 0.3		3.60 \pm 0.05	(6)	3.6	3.56 - 3.70	3.62 \pm 0.05	(4)	3.56	(2)	3	(1)	XRF	---	
Dy	ng/g	---		330	(2)	---	310 - 350	---		330	(2)	---			---	
Er	ng/g	---		< 2000		---	---	---		---		< 2000		XRF	---	
Eu	ng/g	60		62 \pm 3	(4)	61	59 - 66	---		62 \pm 3	(4)	---			---	
F	ug/g	---		53 \pm 30	(3)	63	20 - 77	---		---		77	(1)	IC	41.5	(2) ISE
Fe	ug/g	2390 \pm 50		2290 \pm 60	(11)	2300	2180 - 2380	2300	(2)	2280 \pm 60	(7)	2380	(1)	ICPES	2200	(1) TCGS
Ga	ug/g	1.05		1.1	(1)	---	---	---		---		1.1	(1)	XRF	---	
Gd	ng/g	---		340 \pm 105	(3)	350	230 - 440	---		440	(1)	290	(2)	TCGS	---	
Ge	ug/g	---		0.5	(1)	---	---	---		---		0.5	(1)	XRF	---	
H	%	---		4.07	(2)	---	3.96 - 4.18	---		---		4.18	(1)	CB	3.96	(1) TCGS
H2O-	%	---		15.4	(2)	---	14 - 16.8	---		---		16.8	(1)	GRAV	14	(1) FD
Hf	ng/g	290		288 \pm 33	(6)	290	240 - 340	---		288 \pm 33	(6)	---			---	
Hg	ng/g	---		20	(2)	---	5 - 35	5	(1)	35	(1)	---			---	
Ho	ng/g	---		49	(1)	---	---	---		49	(1)	---			---	

TABLE 1635-1: COMPILED DATA FOR NBS SRM 1635 TRACE ELEMENTS IN COAL (cont.)

ELEMENT	UNITS	NBS		CONSENSUS		MEDIAN	RANGE	AA		NAA		OTHER METHODS					
		Mean ±	SD	Mean ±	SD			Mean ±	SD	Mean	(n)	Method	Mean ±	SD	(n)	Method	
I	ng/g	---	---	600	(1)	---	---	---	---	600	(1)	---	---	---	---	---	---
In	ng/g	---	---	5	(1)	---	---	---	---	5	(1)	---	---	---	---	---	---
K	ug/g	---	---	96 ± 16	(6)	97	70 - 120	100	(2)	105	(2)	70	(1)	ICPES	97	(1)	TCGS
La	ug/g	---	---	1.8 ± 0.3	(7)	1.93	1.38 - 2.10	---	---	1.8 ± 0.3	(6)	2	(1)	XRF	---	---	---
Li	ug/g	---	---	0.83	(1)	---	---	---	---	---	---	0.83	(1)	ICPES	---	---	---
Lu	ng/g	---	---	28 ± 9	(4)	27	15 - 36	---	---	28 ± 9	(4)	---	---	---	---	---	---
Mg	ug/g	---	---	1040 ± 130	(6)	1000	940 - 1300	1000	(2)	1080 ± 190	(3)	1013	(1)	ICPES	---	---	---
Mn	ug/g	21.4 ± 1.5	---	21.4 ± 1.5	(13)	21.8	19 - 24	21.8 ± 0.7	(4)	20.4 ± 1.3	(6)	23	(1)	XRF	21.4	(1)	ESR
Mn	ug/g	---	---	---	---	---	---	---	---	---	---	24	(1)	TCGS	---	---	---
Mo	ng/g	---	---	270	(1)	---	---	---	---	270	(1)	---	---	---	---	---	---
N	%	---	---	1.16 ± 0.32	(3)	1.0	0.95 - 1.52	---	---	---	---	0.95	(1)	IC	1.0	(1)	TCGS
N	%	---	---	---	---	---	---	---	---	---	---	1.52	(1)	CB	---	---	---
Na	ug/g	2400	---	2390 ± 200	(12)	2400	2070 - 2800	2900	(2)	2350 ± 80	(7)	2180	(2)	ICPES	2420	(1)	XRF
Na	ug/g	---	---	---	---	---	---	---	---	---	---	2700	(1)	TCGS	---	---	---
Nb	ug/g	---	---	< 1	---	---	---	---	---	---	---	< 1	---	XRF	---	---	---
Nd	ug/g	---	---	1.38	(2)	---	1.35 - 1.40	---	---	1.38	(2)	---	---	---	---	---	---
Ni	ug/g	1.74 ± 0.10	---	1.8 ± 0.2	(6)	1.8	1.5 - 2.20	1.8 ± 0.30	(4)	1.78	(2)	3	(1)	XRF	---	---	---
O	%	---	---	30 ± 8	(3)	33	20.79 - 34.99	---	---	---	---	---	---	---	29.6 ± 7.7	(3)	14NAA
P	ug/g	---	---	61.5	(2)	---	60 - 63	---	---	---	---	60	(1)	ICPES	63	(1)	XRF
Pb	ug/g	1.9 ± 0.2	---	1.9 ± 0.4	(6)	1.9	1.48 - 2.60	1.82 ± 0.20	(5)	---	---	2.6	(1)	XRF	---	---	---
Pb-210	pCi/g	---	---	0.0699	(1)	---	---	---	---	---	---	---	---	---	0.0699	(1)	NM
Pr	ug/g	---	---	< 1	---	---	---	---	---	< 4.3	---	< 1	---	XRF	---	---	---
Rb	ug/g	---	---	0.85 ± 0.10	(3)	0.83	0.76 - 0.95	---	---	0.85 ± 0.10	(3)	---	---	---	---	---	---
S	ug/g	3300 ± 300	---	3360 ± 245	(8)	3300	2880 - 3640	---	---	---	---	2880	(1)	ICPES	3540	(1)	XRF
S	ug/g	---	---	---	---	---	---	---	---	---	---	3300	(1)	IC	3460 ± 180	(3)	CB
S	ug/g	---	---	---	---	---	---	---	---	---	---	3200	(1)	TCGS	3540	(1)	IDMS
S-32/34	ratio	---	---	22.546	(1)	---	---	---	---	---	---	---	---	---	22.546	(1)	IDMS
S-33/34	ratio	---	---	0.1778	(1)	---	---	---	---	---	---	---	---	---	0.1778	(1)	IDMS

TABLE 1635-1: COMPILED DATA FOR NBS SRM 1635 TRACE ELEMENTS IN COAL (cont.)

ELEMENT	UNITS	NBS Mean ± SD	CONSENSUS		MEDIAN	RANGE	AA		NAA		Mean	(n)	Method	OTHER METHODS	
			Mean ± SD	(n)			Mean ± SD	(n)	Mean ± SD	(n)				Method	Mean ± SD
Sb	ng/g	140	150 ± 30	(10)	140	120 - 200	177 ± 40	(3)	144 ± 17	(7)	---	---	---	---	---
Sc	ng/g	630	630 ± 50	(6)	610	560 - 700	---	---	630 ± 50	(6)	---	---	---	---	---
Se	ug/g	0.9 ± 0.3	0.94 ± 0.09	(14)	0.97	0.79 - 1.10	0.92 ± 0.09	(5)	0.95 ± 0.10	(8)	1.2	(1)	XRF	0.9	(1) AF
Si	ug/g	---	5900 ± 500	(5)	6000	5200 - 6500	6100	(2)	---	---	6500	(1)	ICPES	5600	(1) 14NAA
Si	ug/g	---	---	---	---	---	---	---	---	---	5200	(1)	TCGS	---	---
Sm	ng/g	---	290 ± 40	(7)	270	250 - 340	---	---	290 ± 40	(6)	250	(1)	TCGS	---	---
Sn	ng/g	---	< 600	---	---	---	---	---	---	---	< 600	---	XRF	---	---
Sr	ug/g	---	121 ± 19	(5)	127	90 - 140	---	---	125 ± 6	(3)	90	(1)	ICPES	140	(1) XRF
Ta	ng/g	---	45.8 ± 1.7	(4)	45	44 - 48	---	---	45.8 ± 1.7	(4)	---	---	---	---	---
Tb	ng/g	---	42	(2)	---	35 - 50	---	---	42.5	(2)	---	---	---	---	---
Te	ng/g	---	< 290	---	---	---	---	---	< 290	---	< 600	---	XRF	---	---
Th	ng/g	620 ± 40	610 ± 30	(7)	630	560 - 640	---	---	610 ± 30	(7)	---	---	---	---	---
Th-228	pCi/g	---	0.0648	(1)	---	---	---	---	---	---	0.0648	(1)	NM	---	---
Th-230	pCi/g	---	0.0765	(1)	---	---	---	---	---	---	0.0765	(1)	NM	---	---
Th-232	pCi/g	---	0.0619	(1)	---	---	---	---	---	---	0.0619	(1)	NM	---	---
Ti	ug/g	200	202 ± 6	(9)	200	190 - 210	---	---	207 ± 6	(3)	201	(1)	ICPES	204	(2) XRF
Ti	ug/g	---	---	---	---	---	---	---	---	---	200	(2)	COLOR	190	(1) TCGS
Tl	ng/g	---	< 1000	---	---	---	---	---	---	---	< 1000	---	XRF	---	---
Tm	ng/g	---	63	(1)	---	---	---	---	63	(1)	---	---	---	---	---
U	ng/g	240 ± 20	250 ± 40	(5)	240	200 - 320	---	---	250 ± 50	(5)	---	---	---	---	---
U-234	pCi/g	---	0.0719	(1)	---	---	---	---	---	---	0.0719	(1)	NM	---	---
U-235	pCi/g	---	0.0049	(1)	---	---	---	---	---	---	0.0049	(1)	NM	---	---
U-238	pCi/g	---	0.0731	(1)	---	---	---	---	---	---	0.0731	(1)	NM	---	---
V	ug/g	5.2 ± 0.5	4.5 ± 0.6	(10)	4.5	3.5 - 6.7	5.6 ± 1.4	(5)	4.5 ± 0.3	(6)	4	(1)	XRF	---	---
W	ng/g	---	190	(2)	---	173 - 210	---	---	192	(2)	---	---	---	---	---
Y	ug/g	---	1.9	(1)	---	---	---	---	---	---	1.9	(1)	XRF	---	---
Yb	ng/g	---	165 ± 16	(5)	170	140 - 179	---	---	165 ± 16	(5)	---	---	---	---	---
Zn	ug/g	4.7 ± 0.5	5.8 ± 1.2	(9)	5.4	4.2 - 7.8	4.8 ± 0.4	(4)	6.8 ± 1.1	(4)	5.6	(1)	XRF	---	---
Zr	ug/g	---	16 ± 2	(4)	15.7	15 - 19.4	---	---	17 ± 2	(3)	15	(1)	XRF	---	---

TABLE 1635-2: INDIVIDUAL DATA FOR NBS SRM 1635 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ag (ng/g)</u>					<u>Ba (ug/g)</u>				
<	38	L	ITNA	82SUZ 02	47	2		ICPES	84NAD 01
<	500		ITNA	86GLA 01	67	20	9	ITNA	82SUZ 02
<	2500	L	WXRF	82MIL 01	69	6		ITNA	85GAU 04
<u>Al (ug/g)</u>					70	9		ITNA	80GER 01
2600			ITNA	84CLE 01	72	17	5	ITNA	80TOU 01
2600	100		ICPES	84NAD 01	74	18		ITNA	84SUZ 02
2700		34	AA	83BET 01	77	24	9	ITNA	82SUZ 02
2800	500	34	AA	83BET 01	81		34	WXRF	82MIL 01
2900	200		ITNA	86GLA 01	<u>Be (ug/g)</u>				
2960	170		ITNA	85GAU 04	0.46	0.04	11	AA	82LIN 03
3000	300		ITNA	82SUZ 02	0.49	0.01	11	AA	82LIN 03
3000	300		ITNA	80GER 01	0.49	0.05	11	AA	82LIN 03
3100	100		ITNA	82HAM 01	<u>Bi (ug/g)</u>				
3352	25		ICPES	85PEA 01	<	1	L	WXRF	82MIL 01
3400	400	D	TCGS	80GER 01	<u>Br (ug/g)</u>				
3400	400	D	TCGS	80AND 01	<	1		ITNA	86GLA 01
3400	400		TCGS	79FAI 01	0.84	0.14		ITNA	85GAU 04
<u>As (ng/g)</u>					1.07	0.17		ITNA	82SUZ 02
280	20		HAA	82NAD 01	1.22	0.24		ITNA	84SUZ 02
320			FAA	82WIL 01	1.5	0.07		ITNA	82HAM 01
330			AF	82WIL 01	1.6	0.3		ITNA	80GER 01
400		11	HAA	82CRO 03	1.9	0.2	5	ITNA	80TOU 01
400		11	HAA	82CRO 03	3		34	WXRF	82MIL 01
400	50		ITNA	82SUZ 02	<u>C (%)</u>				
400	100		HAA	85LIN 02	59	3		TCGS	79FAI 01
430	40		RTNA	84DEL 01	59	3	D	TCGS	80GER 01
440	50		RTNA	78GAL 01	59	3	D	TCGS	80AND 01
510	40		ITNA	85GAU 04	66.23	0.06		CB	80SCH 02
530	50		ITNA	82HAM 01	<u>Ca (ug/g)</u>				
700		34	WXRF	82MIL 01	4800			ITNA	84CLE 01
700	400		ITNA	80GER 01	4900	500		ITNA	82HAM 01
<u>ASH (%)</u>					5090	30		ICPES	84NAD 01
4.5			UU	85SHI 01	5100	500		ITNA	86GLA 01
4.8		34	CB	82MIL 01	5300	250		ITNA	85GAU 04
<u>Au (ng/g)</u>					5400	200	D	TCGS	80AND 01
<	6		ITNA	86GLA 01	5400	200		TCGS	79FAI 01
<u>B (ug/g)</u>					5400	200	D	TCGS	80GER 01
104.5	2.6		TCGS	79FAI 01	5500	400	34	AA	83BET 01
105	3	D	TCGS	80GER 01	5500	900		ITNA	82SUZ 02
105	3		TCGS	80AND 01	5700		34	AA	83BET 01
135	11		ITNA	82SCH 05	5700	700		ITNA	80GER 01
					5834.4			ICPES	85PEA 01

TABLE 1635-2: INDIVIDUAL DATA FOR NBS SRM 1635 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Cd (ng/g)</u>					<u>Cr (ug/g) cont.</u>				
<	380	L	ITNA	82SUZ 02	2.55	0.17		ITNA	85GAU 04
<	450		ITNA	84SUZ 02	2.6		34	FAA	83BET 01
<	3000	L	WXRF	82MIL 01	2.6	0.3	12	ITNA	82SUZ 02
29	3		RTNA	78GAL 01	2.9	0.6	34	FAA	83BET 01
					3.5	0.9	11	AA	82LIN 03
					4	1		ITNA	86GLA 01
<u>Ce (ug/g)</u>					<u>Cs (ng/g)</u>				
3.2	0.3		ITNA	84SUZ 02	<	500	L	WXRF	82MIL 01
3.3	0.2	12	ITNA	82SUZ 02	<	2100		ITNA	84SUZ 02
3.4	0.2	12	ITNA	82SUZ 02	46	5		ITNA	80GER 01
3.4	0.3		ITNA	85GAU 04	53	6		ITNA	82SUZ 02
3.5	0.5		ITNA	80GER 01	60	10		ITNA	85GAU 04
3.6	0.86		ITNA	82HAM 01					
8		34	WXRF	82MIL 01					
<u>Cl (ug/g)</u>					<u>Cu (ug/g)</u>				
26	2	D	TCGS	80GER 01	3		34	WXRF	82MIL 01
26	2	D	TCGS	80AND 01	3.56	0.18		RTNA	78GAL 01
26	2		TCGS	79FAI 01	3.56	0.18		RTNA	84DEL 01
26	4		ITNA	80GER 01	3.6		34	FAA	83BET 01
27	6		ITNA	85GAU 04	3.6	0.2	11	AA	82LIN 03
28	2		IC	83NAD 01	3.6	1	34	FAA	83BET 01
36		34	WXRF	82MIL 01	3.7	0.1	11	AA	82LIN 03
					14	3		ICPES	84NAD 01
<u>Co (ng/g)</u>					<u>Dy (ng/g)</u>				
590	60		ITNA	80GER 01	<	600		ITNA	86GLA 01
600	150	34	FAA	83BET 01	<	740	L	ITNA	82SUZ 02
610	180		ITNA	84SUZ 02	<	2000	L	WXRF	82MIL 01
620		34	FAA	83BET 01	310	40		ITNA	80GER 01
620	60		ITNA	82SUZ 02	350	40		ITNA	84SUZ 02
630	40		ITNA	85GAU 04					
630	50		ITNA	86GLA 01					
640			ITNA	84CLE 01					
650	70		ITNA	82HAM 01					
700		34	WXRF	82MIL 01					
<u>Cr (ug/g)</u>					<u>Er (ng/g)</u>				
1.9			ITNA	84CLE 01	<	2000	L	WXRF	82MIL 01
1.9	0.2	11	AA	82LIN 03					
2		34	WXRF	82MIL 01					
2	0.3		ITNA	82HAM 01					
2.3	0.2		ITNA	80GER 01					
2.4	0.1		ITNA	84SUZ 02					
2.48	0.08		RTNA	78GAL 01					
2.5	0.2	12	ITNA	82SUZ 02					
<u>Cr (ug/g)</u>					<u>Eu (ng/g)</u>				
1.9			ITNA	84CLE 01	<	100		ITNA	86GLA 01
1.9	0.2	11	AA	82LIN 03	59	2		ITNA	82SUZ 02
2		34	WXRF	82MIL 01	61	5		ITNA	84SUZ 02
2	0.3		ITNA	82HAM 01	61	7		ITNA	80GER 01
2.3	0.2		ITNA	80GER 01	66	6		ITNA	85GAU 04
2.4	0.1		ITNA	84SUZ 02					
2.48	0.08		RTNA	78GAL 01					
2.5	0.2	12	ITNA	82SUZ 02					
<u>F (ug/g)</u>					20			ISE	83KNA 01
					63	4		ISE	83BET 02
					77	1		IC	83NAD 01

TABLE 1635-2: INDIVIDUAL DATA FOR NBS SRM 1635 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Fe (ug/g)</u>					<u>Hf (ng/g)</u>				
1340	30		ICPES	84NAD 01	240	40	9	ITNA	82SUZ 02
1900			ITNA	84CLE 01	270	40		ITNA	80GER 01
2180	170		ITNA	84SUZ 02	290	20	9	ITNA	82SUZ 02
2200	100		TCGS	79FAI 01	290	30		ITNA	85GAU 04
2200	100	D	TCGS	80AND 01	300	30		ITNA	84SUZ 02
2200	100	D	TCGS	80GER 01	340	40		ITNA	86GLA 01
2200	200		ITNA	82HAM 01	<u>Hg (ng/g)</u>				
2300		34	AA	83BET 01	<	48		ITNA	84SUZ 02
2300	200		ITNA	86GLA 01	<	56	L	ITNA	82SUZ 02
2300	200		ITNA	80GER 01	<	1500	L	WXRF	82MIL 01
2300	600	34	AA	83BET 01	5	15		CVA	82DOO 01
2320	70		ITNA	85GAU 04	35	11	12	ITNA	82SUZ 02
2330	240	12	ITNA	82SUZ 02	<u>Ho (ng/g)</u>				
2340	140	12	ITNA	82SUZ 02	<	1500	L	WXRF	82MIL 01
2380			ICPES	85PEA 01	49	20		ITNA	84SUZ 02
<u>Ga (ug/g)</u>					<u>I (ng/g)</u>				
<	2	L	ITNA	82SUZ 02	<	750		ITNA	84SUZ 02
<	7		ITNA	86GLA 01	<	860	L	ITNA	82SUZ 02
1.1		34	WXRF	82MIL 01	<	1300	L	WXRF	82MIL 01
<u>Gd (ng/g)</u>					600	300		ITNA	80GER 01
<	1500	L	WXRF	82MIL 01	<u>In (ng/g)</u>				
230	10		TCGS	79FAI 01	<	31	L	ITNA	82SUZ 02
350	20		TCGS	80AND 01	<	1000	L	WXRF	82MIL 01
440	60		ITNA	84SUZ 02	5	2		ITNA	80GER 01
<u>Ge (ug/g)</u>					<u>K (ug/g)</u>				
0.5		34	WXRF	82MIL 01	70			ICPES	84NAD 01
<u>H (%)</u>					90	90		ITNA	82SUZ 02
3.96	0.03	D	TCGS	80AND 01	97	6	D	TCGS	80GER 01
3.96	0.03	D	TCGS	80GER 01	97	6		TCGS	79FAI 01
3.96	0.03		TCGS	79FAI 01	97	6	D	TCGS	80AND 01
4.18	0.14		CB	80SCH 02	100		34	AA	83BET 01
<u>H2O- (%)</u>					100	20	34	AA	83BET 01
14			FD	80KHA 02	120	10		ITNA	80GER 01
16.8			GRAV	85LIN 02	199.2	39.84		ICPES	85PEA 01

TABLE 1635-2: INDIVIDUAL DATA FOR NBS SRM 1635 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>La (ug/g)</u>					<u>Mo (ng/g)</u>				
1.38	0.07		ITNA	82SUZ 02	<	1000	L	WXRF	82MIL 01
1.42	0.08		ITNA	84SUZ 02	<	5000		ITNA	86GLA 01
1.78	0.09		ITNA	86GLA 01	270	100		ITNA	82SUZ 02
1.93	0.08		ITNA	85GAU 04	<u>N (%)</u>				
2		34	WXRF	82MIL 01	0.95	0.01		IC	83NAD 01
2	0.25		ITNA	82HAM 01	1	0.1	D	TCGS	80GER 01
2.1	0.3		ITNA	80GER 01	1	0.1	D	TCGS	80AND 01
<u>Li (ug/g)</u>					1	0.1		TCGS	79FAI 01
0.83	0.28		ICPES	84NAD 01	1.52	0.02		CB	80SCH 02
<u>Lu (ng/g)</u>					<u>Na (ug/g)</u>				
<	30		ITNA	86GLA 01	2070	30		ICPES	84NAD 01
15	3		ITNA	85GAU 04	2200	160		ITNA	82SCH 05
27	4		ITNA	80GER 01	2279.424			ICPES	85PEA 01
33	14		ITNA	84SUZ 02	2300	70		ITNA	86GLA 01
36	7		ITNA	82SUZ 02	2320			ITNA	84CLE 01
<u>Mg (ug/g)</u>					2400	70		ITNA	82HAM 01
600			ICPES	84NAD 01	2400	200		ITNA	80GER 01
940	190		ITNA	82SUZ 02	2400	200		ITNA	82SUZ 02
1000		34	AA	83BET 01	2410	50		ITNA	85GAU 04
1000	100	34	AA	83BET 01	2420		34	WXRF	82MIL 01
1000	200		ITNA	80GER 01	2700	50	D	TCGS	80AND 01
1013.04			ICPES	85PEA 01	2700	50	D	TCGS	80GER 01
1300	200		ITNA	82HAM 01	2700	50		TCGS	79FAI 01
<u>Mn (ug/g)</u>					2800		34	AA	83BET 01
15.7	0.8		ICPES	84NAD 01	3000	300	34	AA	83BET 01
19			ITNA	84CLE 01	<u>Nb (ug/g)</u>				
19	1.2		ITNA	82SUZ 02	<	1	L	WXRF	82MIL 01
20.2	0.3		ITNA	86GLA 01	<u>Nd (ug/g)</u>				
20.4	1.5		ITNA	85GAU 04	<	1	L	WXRF	82MIL 01
20.8	2.1	34	FAA	83BET 01	<	1.6	12	ITNA	82SUZ 02
21.4			ESR	85SHI 01	<	1.8	12	ITNA	82SUZ 02
21.8	2.1		ITNA	82HAM 01	1.35	0.15		ITNA	84SUZ 02
22	3		ITNA	80GER 01	1.4	0.2		ITNA	80GER 01
22.1		34	FAA	83BET 01	<u>Ni (ug/g)</u>				
22.2	0.1	11	AA	82LIN 03	1.5	0.1	11	AA	82LIN 03
22.3	0.8	11	AA	82LIN 03	1.72	0.32	12	ITNA	82SUZ 02
23		34	WXRF	82MIL 01	1.78		34	FAA	83BET 01
24	7	D	TCGS	80GER 01	1.8	0.5	34	FAA	83BET 01
24	7	D	TCGS	80AND 01	1.83	0.23	12	ITNA	82SUZ 02
24	7		TCGS	79FAI 01	2.2	0.2	11	AA	82LIN 03
345.6			ICPES	85PEA 01	3		34	WXRF	82MIL 01

TABLE 1635-2: INDIVIDUAL DATA FOR NBS SRM 1635 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>O (%)</u>					<u>S-32/34 (ratio)</u>				
20.79	0.19	34	14NAA	80KHA 02	22.546			IDMS	84KEL 01
33	1.6		14NAA	80NAD 01					
34.99	0.32	35	14NAA	80KHA 02	<u>S-33/34 (ratio)</u>				
<u>P (ug/g)</u>					0.1778			IDMS	84KEL 01
60	9		ICPES	84NAD 01	<u>Sb (ng/g)</u>				
63		34	WXRf	82MIL 01	< 200			ITNA	86GLA 01
251	21		ICPES	85PEA 01	< 1000		L	WXRf	82MIL 01
<u>Pb (ug/g)</u>					120	10		RTNA	78GAL 01
1.48	0.21		HAA	82NAD 01	130			ITNA	84CLE 01
1.8	0.1	11	AA	82LIN 03	130	10		HAA	82NAD 01
1.9	0.3	11	AA	82LIN 03	140	10		ITNA	80GER 01
1.9	0.6	34	FAA	83BET 01	140	10		ITNA	82HAM 01
2		34	FAA	83BET 01	147	21		ITNA	85GAU 04
2.6		34	WXRf	82MIL 01	160	30		ITNA	82SUZ 02
<u>Pb-210 (pCi/g)</u>					170	40	5	ITNA	80TOU 01
0.0699	0.0013		NM	80CAS 01	200		11	HAA	82CRO 03
0.07	0.001	D	NM	81CAS 01	200		11	HAA	82CRO 03
<u>Pr (ug/g)</u>					<u>Sc (ng/g)</u>				
<	1	L	WXRf	82MIL 01	< 1200		L	ITNA	80TOU 01
<	4.3	12	ITNA	82SUZ 02	560	50		ITNA	82SUZ 02
<	4.4	12	ITNA	82SUZ 02	610	14		ITNA	85GAU 04
<u>Rb (ug/g)</u>					610	20		ITNA	82HAM 01
<	0.3	L	WXRf	82MIL 01	610	40		ITNA	86GLA 01
0.76	0.09	12	ITNA	82SUZ 02	690	70		ITNA	80GER 01
0.83	0.08	12	ITNA	82SUZ 02	700	30	5	ITNA	80TOU 01
0.95	0.37		ITNA	85GAU 04	900		34	WXRf	82MIL 01
<u>S (ug/g)</u>					<u>Se (ug/g)</u>				
2880	40		ICPES	85PEA 01	0.79	0.07		HAA	82NAD 01
3200	100	D	TCGS	80AND 01	0.8	0.2		RTNA	80KNA 01
3200	100	D	TCGS	80GER 01	0.82	0.04		RTNA	78GAL 01
3200	100		TCGS	79FAI 01	0.9			AF	82WIL 01
3280	90		CB	85GLA 03	0.9			FAA	82WIL 01
3300	100		IC	83NAD 01	0.93	0.07	7	HAA	84IMA 01
3470	60		CB	86GAU 01	0.93	0.07	D	HAA	84IMA 03
3540	40		XRF	84WEB 01	0.94	0.11	9	ITNA	82SUZ 02
3540	140		IDMS	84KEL 01	0.97	0.03		ITNA	84SUZ 02
3640	50		CB	84GLA 11	0.98	0.09		ITNA	80GER 01
					0.99	0.11	9	ITNA	82SUZ 02
					1.0			ITNA	84CLE 01
					1.0	0.1		HAA	85LIN 01
					1.0	0.1		HAA	85LIN 02
					1.1	0.1		RTNA	84DEL 01
					1.2		34	WXRf	82MIL 01

TABLE 1635-2: INDIVIDUAL DATA FOR NBS SRM 1635 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Si (ug/g)</u>					<u>Te (ng/g)</u>				
5200	200		TCGS	79FAI 01	<	290	L	ITNA	82SUZ 02
5200	200	D	TCGS	80AND 01	<	360		ITNA	84SUZ 02
5200	200	D	TCGS	80GER 01	<	600	34	WXRF	82MIL 01
5600	700		14NAA	80GER 01	<u>Th (ng/g)</u>				
6000	1000	34	AA	83BET 01	560	30		ITNA	84SUZ 02
6200		34	AA	83BET 01	580	40	12	ITNA	82SUZ 02
6500	600		ICPES	84NAD 01	610	70	12	ITNA	82SUZ 02
7600	22		ICPES	85PEA 01	630	25		ITNA	85GAU 04
<u>Sm (ng/g)</u>					630	60		ITNA	86GLA 01
250	10	D	TCGS	80GER 01	640	50	5	ITNA	80TOU 01
250	10	D	TCGS	80AND 01	640	60		ITNA	80GER 01
250	10		TCGS	79FAI 01	<u>Th-228 (fCi/g)</u>				
260	10		ITNA	85GAU 04	64.8	4.1		NM	80CAS 01
260	20		ITNA	82HAM 01	64.8	4.1	D	NM	81CAS 01
270	10	5	ITNA	80TOU 01	<u>Th-23 (fCi/g)</u>				
300	40		ITNA	80GER 01	76.5	7.9		NM	80CAS 01
330	60		ITNA	84SUZ 02	76.5	7.9	D	NM	81CAS 01
340	30		ITNA	82SUZ 02	<u>Th-232 (fCi/g)</u>				
<u>Sn (ug/g)</u>					61.9	7.7	D	NM	81CAS 01
<	0.6	L	WXRF	82MIL 01	61.9	7.7		NM	80CAS 01
<u>Sr (ug/g)</u>					<u>Ti (ug/g)</u>				
90	1		ICPES	84NAD 01	124	2		ICPES	84NAD 01
118	8	12	ITNA	82SUZ 02	190	20	D	TCGS	80GER 01
127	24	12	ITNA	82SUZ 02	190	20	D	TCGS	80AND 01
129	14		ITNA	80GER 01	190	20		TCGS	79FAI 01
140		34	WXRF	82MIL 01	200		34	COLOR	83BET 01
<u>Ta (ng/g)</u>					200		34	WXRF	82MIL 01
<	300		ITNA	86GLA 01	200	20	34	COLOR	83BET 01
<	1000	L	WXRF	82MIL 01	200	40		ITNA	82HAM 01
44	6		ITNA	82SUZ 02	201			ICPES	85PEA 01
45	9		ITNA	84SUZ 02	207			WXRF	83GAR 01
46	9		ITNA	80GER 01	210	20		ITNA	80GER 01
48	9		ITNA	85GAU 04	210	50		ITNA	82SUZ 02
<u>Tb (ng/g)</u>					<u>Tl (ug/g)</u>				
<	100		ITNA	86GLA 01	<	1	L	WXRF	82MIL 01
<	2000	L	WXRF	82MIL 01	<u>Tm (ng/g)</u>				
35	3		ITNA	82SUZ 02	<	1000	L	WXRF	82MIL 01
50	4		ITNA	84SUZ 02	63	10		ITNA	84SUZ 02

TABLE 1635-2: INDIVIDUAL DATA FOR NBS SRM 1635 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>U (ng/g)</u>					<u>Yb (ng/g)</u>				
200	50		ITNA	80GER 01	140	20		ITNA	80GER 01
220	20		ITNA	84SUZ 02	159	3		ITNA	85GAU 04
240	30		ITNA	82SUZ 02	170	60	5	ITNA	80YOU 01
250	10		DNA	86GLA 01	175	12		ITNA	82SUZ 02
320	40	5	ITNA	80YOU 01	179	16		ITNA	84SUZ 02
<u>U-234 (fCi/g)</u>					<u>Zn (ug/g)</u>				
71.9	4.4		NM	80CAS 01	4.2	1	34	FAA	83BET 01
71.9	4.4	D	NM	81CAS 01	4.9		34	FAA	83BET 01
<u>U-235 (fCi/g)</u>					5	0.1	11	AA	82LIN 03
4.9	0.3	D	NM	81CAS 01	5	0.4	11	AA	82LIN 03
4.9	0.3		NM	80CAS 01	5.4	0.76		ITNA	82HAM 01
<u>U-238 (pCi/g)</u>					5.6		34	WXRF	82MIL 01
0.0731	0.0046		NM	80CAS 01	6.6	1.4	12	ITNA	82SUZ 02
0.0731	0.0046	D	NM	81CAS 01	7.5	2.2		ITNA	80GER 01
<u>V (ug/g)</u>					7.8	1.2	12	ITNA	82SUZ 02
3.5	0.3	11	AA	82LIN 03	18	3		ICPES	84NAD 01
4		34	WXRF	82MIL 01	<u>Zr (ug/g)</u>				
4.1			ITNA	84CLE 01	<	60		ITNA	86GLA 01
4.3	0.2		ITNA	82HAM 01	15		34	WXRF	82MIL 01
4.3	0.3		ITNA	82SUZ 02	15.7	4.3	12	ITNA	82SUZ 02
4.5	0.05		ITNA	80GER 01	16	3		ITNA	80GER 01
4.7	0.3		ITNA	85GAU 04	19.4	3.3	12	ITNA	82SUZ 02
5	2		ITNA	86GLA 01	<u>Y (ug/g)</u>				
5.4		34	FAA	83BET 01					
5.4	0.5	34	FAA	83BET 01					
6.7	0.1	11	AA	82LIN 03					
7.2	0.1	11	AA	82LIN 03					
<u>W (ng/g)</u>									
<	900		ITNA	86GLA 01					
<	1000	L	WXRF	82MIL 01					
173	51		ITNA	82SUZ 02					
210	50		ITNA	84SUZ 02					
<u>Y (ug/g)</u>									
1.9		34	WXRF	82MIL 01					

TABLE 1641-1: COMPILED DATA FOR NBS SRM 1641 MERCURY IN WATER
(revised 3/1/86)

ELE	UNITS	NBS		CONSENSUS Mean (n)	METHOD
		Mean \pm	SD		
Hg	ug/mL	1.49 \pm 0.05		1.47 (1)	AA

TABLE 1641-2: INDIVIDUAL DATA FOR NBS SRM 1641 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference
<u>Hg (mg/L)</u>				
1.47	0.17		CVAA	82GLA 02

TABLE 1641A-1: COMPILED DATA FOR NBS SRM 1641A MERCURY IN WATER
(revised 3/1/86)

ELE	UNITS	NBS	
		Mean \pm	SD
Hg	ug/mL	1.1 \pm 0.05	

TABLE 1641B-1: COMPILED DATA FOR NBS SRM 1641B MERCURY IN WATER
(revised 3/1/86)

ELE	UNITS	NBS		CONSENSUS Mean (n)	METHOD
		Mean \pm	SD		
Hg	ug/mL	1.52 \pm 0.04		1.52 (1)	NAA

TABLE 1641B-2: INDIVIDUAL DATA FOR NBS SRM 1641B (revised 3/1/86)

Conc	Uncer	Com	Method	Reference
<u>Hg (ug/g)</u>				
1.52	0.05		RTNA	85FEN 01

TABLE 1642-1: COMPILED DATA FOR NBS SRM 1642 MERCURY IN WATER
(revised 3/1/86)

ELE	UNITS	NBS
		Mean \pm SD
Hg	ng/mL	1.18 \pm 0.05

TABLE 1642A-1: COMPILED DATA FOR NBS SRM 1642A MERCURY IN WATER
(revised 3/1/86)

ELE	UNITS	NBS	CONSENSUS	MEDIAN	RANGE	METHOD
		Mean \pm SD	Mean \pm SD (n)			
Hg	ng/mL	1.1 \pm 0.06	1.22 \pm 0.07 (4)	1.19	1.14 - 1.30	AA

TABLE 1642A-2: INDIVIDUAL DATA FOR NBS SRM 1642A (revised 3/1/86)

Conc	Uncer	Com	Method	Reference
<u>Hg (ug/L)</u>				
1.14	0.05		CVAA	85GAU 04
1.19	0.02		CVAA	81KAH 01
1.24			CVAA	84GLA 11
1.30			CVAA	82GLA 02

TABLE 1642B-1: COMPILED DATA FOR NBS SRM 1642B MERCURY IN WATER
(revised 3/1/86)

ELE	UNITS	NBS	CONSENSUS	RANGE	METHOD
		Mean \pm SD	Mean (n)		
Hg	ng/mL	1.49 \pm 0.06	1.46 (2)	1.45 - 1.48	AA

TABLE 1642B-2: INDIVIDUAL DATA FOR NBS SRM 1642B (revised 3/1/86)

Conc	Uncer	Com	Method	Reference
<u>Hg (ug/L)</u>				
1.45	0.13		CVAA	86GAU 01
1.48	0.06		CVAA	85GAU 04

TABLE 1643-1: COMPILED DATA FOR NBS SRM 1643 TRACE ELEMENTS IN WATER (revised 3/1/86)

ELE	UNITS	NBS		CONSENSUS		MEDIAN	RANGE	AA		ICPES		OTHER METHODS		Mean	(n)	Method
		Mean \pm	SD	Mean \pm	SD			Mean \pm	SD	Mean	(n)	Mean	(n)			
Al	ng/g	77 \pm 1		78 \pm 6	(6)	77.1	69 - 83	79 \pm 7	(3)	69	(1)	77.1	(1)	83	(1)	DCPES
As	ng/g	76 \pm 1		75 \pm 3	(5)	75.7	71 - 79	75.7	(1)	72	(2)	78.5	(2)	---	---	---
Au	ng/g	10		---		---	---	---		---		---		---	---	---
Ba	ng/g	18		18.9 \pm 1.5	(6)	18	17.3 - 21.5	19.0 \pm 1.7	(4)	---		18.5	(2)	---	---	---
Be	ng/g	19 \pm 1		20	(2)	---	18.8 - 21.3	18.8	(1)	---		21.3	(1)	---	---	---
Ca	ug/g	27		23.9	(1)	---	---	---		---		23.9	(1)	---	---	---
Cd	ng/g	8 \pm 1		9.5 \pm 2.4	(5)	9	7.1 - 12	8.9 \pm 2.7	(3)	---		9	(1)	12	(1)	FE
Co	ng/g	17 \pm 1		20 \pm 2	(8)	20	16 - 23	18.4 \pm 1.7	(5)	22	(1)	21.5	(2)	---	---	---
Cr	ng/g	15 \pm 1		17.3 \pm 1.8	(6)	16	16 - 20	17.6 \pm 1.8	(5)	16	(1)	---		---	---	---
Cu	ng/g	16 \pm 1		15.7 \pm 0.9	(9)	16	14 - 17	15.3 \pm 0.8	(6)	19	(1)	16.5	(2)	16.2	(1)	AE-AF
Fe	ng/g	75 \pm 1		78 \pm 3	(10)	78	72 - 82	76 \pm 3	(5)	81	(1)	82	(2)	76	(1)	DCPES
Fe	ng/g	---		---		---	---	---		---		78	(1)	---	---	---
Hg	ng/g	2		< 8		---	---	---		---		< 8	XRF	---	---	---
K	ug/g	2		---		---	---	---		---		---		---	---	---
Mg	ug/g	7		5.7	(1)	---	---	---		---		5.7	(1)	---	---	---
Mn	ng/g	29 \pm 1		31 \pm 4	(15)	29	25 - 39	29 \pm 3	(8)	30	(1)	26	(1)	20	(1)	NAA
Mn	ng/g	---		---		---	---	---		---		35.5	(2)	---	---	---
Mn	ng/g	---		---		---	---	---		---		29	(1)	28	(1)	AE-AF
Mo	ng/g	105 \pm 3		105 \pm 8	(8)	104	93 - 118	106 \pm 8	(6)	93	(1)	110	(1)	---	---	---
Na	ug/g	10		8.8	(1)	---	---	---		---		8.8	(1)	---	---	---
Ni	ng/g	49 \pm 1		49 \pm 2	(12)	50	44 - 52	48 \pm 3	(7)	48	(1)	53	(2)	48	(1)	DCPES
Ni	ng/g	---		---		---	---	---		---		51.3	(1)	50	(1)	FE
Pb	ng/g	20 \pm 1		22 \pm 4	(4)	21	18 - 27	19.5	(2)	---		25	(2)	---	---	---
Se	ng/g	12 \pm 1		11.2 \pm 1.0	(3)	11.6	10 - 12	12	(1)	10	(2)	---		---	---	---
Sn	ng/g	---		< 20		---	---	---		---		< 20	XRF	---	---	---
Sr	ng/g	212 \pm 4		203	(1)	---	---	---		203	(1)	---		---	---	---
V	ng/g	50 \pm 1		48 \pm 6	(7)	50	40 - 55	50 \pm 5	(5)	---		40	(1)	50	(1)	DCPES
Zn	ng/g	65 \pm 3		62 \pm 4	(9)	62	55 - 69	62 \pm 5	(5)	67	(1)	62	(2)	61	(1)	DCPES

TABLE 1643-2: INDIVIDUAL DATA FOR NBS SRM 1643 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Al (ng/g)</u>					<u>Co (ng/g)</u>				
50			ITNA	81HAB 01	16	3	14	FAA	84HAR 01
69	3		ICPES	85FLO 01	18	3	14	FAA	84HAR 01
71	8		FAA	84HAR 02	18	6	14	FAA	84HAR 01
77.1	5.7		AE-AF	78EPS 01	20	2		XRF	80BER 02
82.1	1.4		FAA	78EPS 01	20	5		FAA	84HAR 02
83			FAA	84SLA 02	20	5	14	FAA	84HAR 01
83	2	D	DCPES	81REE 01	22	2		ICPES	85FLO 01
83	2		DCPES	79REE 01	23	2		EXRF	84KNA 01
<u>As (ng/g)</u>					<u>Cr (ng/g)</u>				
71			ICPES	82NYG 01	16	1		ICPES	85FLO 01
73	1		ICPES	83PRU 01	16	2	14	FAA	84HAR 01
75.7	1.3		HAA	80YAN 01	16	2	14	FAA	84HAR 01
78		13	ASV	82LEU 01	17	2	14	FAA	84HAR 01
79		13	ASV	82LEU 01	19	5	14	FAA	84HAR 01
<u>Ba (ng/g)</u>					20	5		FAA	84HAR 02
17.3	1.8		AE-AF	79EPS 03	<u>Cu (ng/g)</u>				
18		14	FAA	79EPS 03	14	0.3		FAA	78EPS 01
18			FAA	78BEA 01	15	1		FAA	84HAR 02
18.7	0.7		FAA	78EPS 01	15	2	14	FAA	84HAR 01
19.7	1		AE-AF	78EPS 01	16	2	14	FAA	84HAR 01
21.5	1.2	14	FAA	79EPS 03	16	2	14	FAA	84HAR 01
42	1		ICPES	85FLO 01	16	2	14	FAA	84HAR 01
<u>Be (ng/g)</u>					16	3		EXRF	84KNA 01
18.8	0.4		FAA	78EPS 01	16.2	1.8		AE-AF	78EPS 01
21.3	5.5		AE-AF	78EPS 01	17	1		XRF	80BER 02
<u>Ca (ug/g)</u>					19	1		ICPES	85FLO 01
23.9			ITNA	81HAB 01	<u>Fe (ng/g)</u>				
<u>Cd (ng/g)</u>					72	3	14	FAA	84HAR 01
7.1		13	FAA	84SLA 02	74	3	14	FAA	84HAR 01
7.5		13	FAA	84SLA 02	76	2	D	DCPES	81REE 01
9	1		EXRF	84KNA 01	76	2		DCPES	79REE 01
12	2		FE	82JEN 05	77	7		FAA	84HAR 02
12	2		FAA	82JEN 05	78			FAF	80EPS 04
					78	3	14	FAA	84HAR 01
					78	5	14	FAA	84HAR 01
					81	6		ICPES	85FLO 01
					82	3		XRF	80BER 02
					82	5		EXRF	84KNA 01
					<u>Hg (ng/g)</u>				
					<	8	L	XRF	80BER 02

TABLE 1643-2: INDIVIDUAL DATA FOR NBS SRM 1643 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Hg (ug/g)</u>					<u>Pb (ng/g)</u>				
5.7			ITNA	81HAB 01	18			FAA	84SLA 02
					21	7		FAA	84HAR 02
					23	2		XRF	80BER 02
					27	9		EXRF	84KNA 01
<u>Mn (ng/g)</u>					<u>Se (ng/g)</u>				
20			ITNA	81HAB 01	10			ICPES	82NYG 01
25			FAA	84SLA 02	11.6	0.3		ICPES	83PRU 01
26	3		XRF	80BER 02	12	1		HAA	81COX 01
27.5	0.7		FAA	78EPS 01	<u>Sn (ng/g)</u>				
28	2	14	FAA	84HAR 01	<	20	L	XRF	80BER 02
28	2.5		AE-AF	78EPS 01	<u>Sr (ng/g)</u>				
29	3		DCPES	79REE 01	203	16		ICPES	85FLO 01
29	3	D	DCPES	81REE 01	<u>V (ng/g)</u>				
29	7	14	FAA	84HAR 01	40			ITNA	81HAB 01
30	1		ICPES	85FLO 01	41	15		FAA	84HAR 02
30	5	14	FAA	84HAR 01	50	2	D	DCPES	81REE 01
31	2		FAA	84HAR 02	50	2		DCPES	79REE 01
31	2	14	FAA	84HAR 01	50	7	14	FAA	84HAR 01
34	1		FAA	82JEN 05	51	7	14	FAA	84HAR 01
35	1		FE	82JEN 05	52	7	14	FAA	84HAR 01
36	1		FE	82JEN 05	55	6	14	FAA	84HAR 01
39	1		FAA	82JEN 05	<u>Zn (ng/g)</u>				
<u>Mo (ng/g)</u>					55	7	14	FAA	84HAR 01
93	4		ICPES	85FLO 01	61	1	D	DCPES	81REE 01
95	17	14	FAA	84HAR 01	61	1		DCPES	79REE 01
102	18	14	FAA	84HAR 01	61	12	14	FAA	84HAR 01
104	3		FAA	78EPS 01	61	17		EXRF	84KNA 01
105	27		FAA	84HAR 02	62	5	14	FAA	84HAR 01
110	5		AE-AF	78EPS 01	62	7	14	FAA	84HAR 01
113	18	14	FAA	84HAR 01	63	3		XRF	80BER 02
118	25	14	FAA	84HAR 01	67	3		ICPES	85FLO 01
<u>Na (ug/g)</u>					69	12		FAA	84HAR 02
8.8			ITNA	81HAB 01					
<u>Ni (ng/g)</u>									
44	5	14	FAA	84HAR 01					
45	4		FAA	82JEN 05					
48	3		ICPES	85FLO 01					
48	4	D	DCPES	81REE 01					
48	4		DCPES	79REE 01					
48	14		FAA	84HAR 02					
49.8	0.8		FAA	78EPS 01					
50	3		FE	82JEN 05					
50	3		XRF	80BER 02					
50	5	14	FAA	84HAR 01					
51	3	14	FAA	84HAR 01					
51.3	4.2		AE-AF	78EPS 01					
52	6	14	FAA	84HAR 01					
56	2		EXRF	84KNA 01					

TABLE 1643A-1: COMPILED DATA FOR NBS SRM 1643A TRACE ELEMENTS IN WATER (revised 3/1/86)

ELEMENT UNITS	NBS		MEDIAN	RANGE		AA		ICPES		Mean \pm SD		OTHER METHODS	
	Mean \pm SD	Consensus Mean \pm SD (n)				Mean \pm SD (n)	SD (n)	Mean \pm SD (n)	SD (n)	Mean \pm SD	(n)	Method	Mean \pm SD (n) Method
Ag	2.8 \pm 0.3	3.3 \pm 0.4 (9)	3.5	2.7 - 3.9		3.1 \pm 0.5 (5)		3.4 (1)		3.6 \pm 0.2 (3)		ICPMS	---
Al	---	125 (2)	---	121 - 129		---		---		129 (1)		NAA	---
As	76 \pm 7	75 \pm 3 (11)	75.1	70 - 80		75 \pm 4 (6)		74.5 (2)		74 (1)		ICPMS	78 (2) NAA
Au	15	15 (1)	---	---		---		15 (1)		---		---	---
Ba	46 \pm 2	47 \pm 4 (8)	45.7	41 - 54		47 \pm 2 (4)		46 (1)		47 \pm 6 (3)		ICPMS	---
Be	19 \pm 2	20 \pm 2 (5)	19	18.6 - 24		---		18.9 \pm 0.2 (4)		24 (1)		ICPMS	---
Ca	27	27.3 \pm 0.5 (7)	27.4	26.5 - 28		28.0 \pm 1.4 (4)		27.3 \pm 0.7 (4)		---		---	---
Cd	10 \pm 1	10.7 \pm 1.2 (22)	10.6	8.4 - 13		11.0 \pm 1.5 (8)		10.8 \pm 1.0 (6)		9.8 \pm 0.4 (3)		NAA	10.1 (1) FAAC
Cd	---	---	---	---		---		---		11.3 \pm 1.5 (3)		ICPMS	---
Cd	---	---	---	---		---		---		10.6 (1)		AAC	---
Cl	---	< 300	---	---		---		---		< 300		NAA	---
Co	19 \pm 2	20.1 \pm 1.3 (13)	20	18.3 - 22		21.2 \pm 0.8 (5)		21 \pm 2 (5)		19 \pm 0.5 (4)		NAA	---
Cr	17 \pm 2	17.9 \pm 1.4 (24)	17.6	16 - 20		18.2 \pm 1.4 (11)		18 \pm 2 (6)		17.8 \pm 1.8 (3)		XRF	17.5 (2) ICPMS
Cr	---	---	---	---		---		---		16.2 \pm 0.3 (3)		NAA	---
Cr(III)	---	14.9 (1)	---	---		---		14.9 (1)		---		---	---
Cr(VI)	---	1.96 (1)	---	---		---		1.96 (1)		---		---	---
Cu	18 \pm 2	18.3 \pm 1.4 (23)	18	15.5 - 21		17.4 \pm 1.1 (12)		19.1 \pm 1.1 (6)		19 \pm 0.2 (4)		NAA	21 (1) ICPMS
Fe	88 \pm 4	87 \pm 5 (18)	87	78 - 100		86 \pm 6 (11)		87 \pm 4 (5)		88 (2)		NAA	---
Hg	< 0.2	0.2 (1)	---	---		---		---		0.2 (1)		ICPMS	---
K	2	1.7 \pm 0.2 (5)	1.7	1.5 - 2.1		1.65 \pm 0.16 (3)		1.9 (2)		---		---	---
Li	---	7 (1)	---	---		---		---		7.0 (1)		ICPMS	---
Mg	8	7.80 \pm 0.06 (7)	7.8	7.7 - 7.9		7.80 \pm 0.08 (4)		8.1 \pm 0.6 (4)		---		---	---
Mn	31 \pm 2	31.6 \pm 1.4 (18)	32	28 - 34		32.1 \pm 1.2 (9)		31 \pm 2 (6)		29 \pm 4 (4)		NAA	---
Mo	95 \pm 6	100 \pm 4 (14)	97	94 - 108		98 \pm 5 (5)		100 \pm 5 (4)		100 \pm 3 (4)		NAA	108 (1) ICPMS
NO ₃	---	1.0 (1)	---	---		---		---		1.0 (1)		ISE	---
Na	9	9.3 \pm 0.4 (6)	9.2	8.9 - 10		9.1 \pm 0.3 (4)		10.4 \pm 1.4 (3)		---		---	---
Ni	55 \pm 3	54 \pm 4 (19)	55	47 - 62		54 \pm 2 (8)		55 \pm 6 (6)		51.5 (2)		ICPMS	56 (2) NAA
Pb	27 \pm 1	27.3 \pm 1.5 (15)	27	24.1 - 30		27.5 \pm 0.9 (8)		26 (2)		27.4 (1)		AAC	---
Pb	---	---	---	---		---		---		28.3 (2)		ICPMS	---
Pb	---	---	---	---		---		---		26.1 (2)		FAAC	---
Se	11 \pm 1	11.2 \pm 0.8 (6)	11	10 - 12		11.1 \pm 0.7 (5)		---		12 (1)		ICPMS	---
Sr	239 \pm 5	227 \pm 16 (9)	232	200 - 246		236 (1)		239 \pm 6 (4)		213 \pm 12 (4)		ICPMS	---
U	---	< 0.01	---	---		---		---		< 0.01		NAA	---
V	53 \pm 3	53 \pm 2 (13)	52	50 - 56		54.2 \pm 1.7 (4)		52.0 \pm 1.8 (4)		51.8 \pm 1.2 (4)		NAA	50 (2) ICPMS
Zn	72 \pm 4	68 \pm 6 (23)	68	57 - 77		66 \pm 6 (11)		68 \pm 4 (6)		69.5 \pm 2.6 (3)		NAA	69 \pm 3 (3) ICPMS

TABLE 1643A-2: INDIVIDUAL DATA FOR NBS SRM 1643A (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ag (ng/g)</u>					<u>Be (ng/g)</u>				
2.7			FAA	82GLA 02	18.6	1		ICPES	82DEM 01
2.8	0.1		FAA	84GLA 02	19	0.4		ICPES	85HEE 01
2.8	0.4		FAA	85GAU 04	19	1	11	ICPES	85NIS 01
3.4	0.5		ICPES	82DEM 01	19	1	11	ICPES	85NIS 01
3.5			ICPMS	85DAT 01	24			ICPMS	85DAT 01
3.5	1	6	ICPMS	83DOU 01					
3.6	1.1		FAA	84GLA 11					
3.8	0.4		FAA	83JEN 01					
3.9	1	6	ICPMS	83DOU 01					
<u>Al (ng/g)</u>					<u>Ca (ug/g)</u>				
57	6		FAA	82JEN 02	26.5	0.5	11	ICPES	85NIS 01
121	8		UU	83LIN 01	26.9	0.8		AA	84GLA 02
129	10		RTNA	83GRE 01	27	0.5	11	ICPES	85NIS 01
					27.4			AA	84GLA 11
					27.5	1.4		AA	85GAU 04
					27.6	0.7		ICPES	85LAN 02
					28	1		ICPES	85HEE 01
					30	4		FAA	82GLA 02
<u>As (ng/g)</u>					<u>Cd (ng/g)</u>				
<	70		ICPES	85LAN 02	5	1		FAA	82JEN 02
70	4		FAA	84GLA 02	8.4	0.8		FAA	85BRE 01
71	5		FAA	84GLA 11	9	1.4		ICPES	85KIM 01
72	62		ICPES	85KIM 01	9.3	0.9		FAA	85GAU 04
74			ICPMS	85DAT 01	9.4	1		RTNA	84BEM 01
74	3		HAA	81KAH 01	9.8	1.7		NAA	84FEN 01
75.1	0.8		NAA	84FEN 01	10	2	6	ICPMS	83DOU 01
76	7		FAA	82GLA 02	10.1	0.5		RTNA	83GRE 01
77	28		ICPES	85HEE 01	10.1	0.8		FAAC	85GAU 04
78	6		FAA	85GAU 04	10.4	0.5		ICPES	82DEM 01
79			FAA	84SLA 02	10.6			AAC	86GAU 01
80	1		ITNA	83JER 01	10.6	0.2	11	FAA	85SUB 01
<u>Au (ng/g)</u>					11			ICPMS	85DAT 01
15	4		ICPES	85HEE 01	11	0.4		ICPES	85HEE 01
					11	1	11	ICPES	85NIS 01
					11	1	11	ICPES	85NIS 01
					11	2		FAA	84GLA 02
					11.4	2.9	11	FAA	85SUB 01
					12			FAA	82GLA 02
					12.2	1.6		ICPES	85LAN 02
					12.5	0.3		FAA	83JEN 01
					12.5	1.3		FAA	83JER 01
					13	2	6	ICPMS	83DOU 01
<u>Ba (ng/g)</u>					<u>Cl (ng/g)</u>				
41	4	6	ICPMS	83DOU 01	<	300		ITNA	84GLA 11
45	6		FAA	84GLA 02					
45	10		AA	84GLA 11					
45.7			ICPMS	85DAT 01					
46	1		ICPES	85HEE 01					
48	3		FAA	82GLA 02					
49	3		FAA	85GAU 04					
54	6	6	ICPMS	83DOU 01					

TABLE 1643A-2: INDIVIDUAL DATA FOR NBS SRM 1643A (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Co (ng/g)</u>					<u>Cr(VI) (ng/g)</u>				
18.3	1.4		NAA	84FEN 01	1.96	0.32		ICPES	85COX 01
18.5	1.8		ICPES	82DEM 01	<u>Cu (ng/g)</u>				
19	1		RTNA	83GRE 01	10	1		FAA	82JEN 02
19	1		RTNA	82GRE 03	15.5	1.8		FAA	83JEN 01
19.5	0.6		RTNA	84BEM 01	16			FAA	82GLA 02
20			FAA	84SLA 02	17			AA	84GLA 11
20	2	11	ICPES	85NIS 01	17	1	14	FAA	84HAR 01
20	2	11	ICPES	85NIS 01	17	2		FAA	83JER 01
21	3	14	FAA	84HAR 01	17	2.6		FAA	85GAU 04
21	3	14	FAA	84HAR 01	17.1	3.8	11	FAA	85SUB 01
21.5	2		ICPES	85LAN 02	18	1	11	ICPES	85NIS 01
22	3	14	FAA	84HAR 01	18	2	14	FAA	84HAR 01
22	3	14	FAA	84HAR 01	18	2	14	FAA	84HAR 01
24	4		ICPES	85HEE 01	18	3		ICPES	85HEE 01
<u>Cr (ng/g)</u>					18	3	14	FAA	84HAR 01
14.2	3.4		ICPES	85LAN 02	18.8	2.4		NAA	84FEN 01
16	2		RTNA	83GRE 01	19	1		FAA	84GLA 02
16	2		RTNA	82GRE 03	19	2	11	ICPES	85NIS 01
16	2	14	FAA	84HAR 01	19.1	0.6		RTNA	83GRE 01
16.2	1.5	D	CPXRF	84SIM 02	19.1	0.6		RTNA	82GRE 03
16.2	1.5	11	CPXRF	84SIM 01	19.2	2		RTNA	84BEM 01
16.4	3.1	11	FAA	85SUB 01	19.3	3.1		ICPES	85LAN 02
16.6	0.7		RTNA	84BEM 01	19.5	1.3		ICPES	82DEM 01
17	1	6	ICPMS	83DOU 01	19.5	3.2	11	FAA	85SUB 01
17	1	11	ICPES	85NIS 01	21	3	6	ICPMS	83DOU 01
17	1		ICPES	85HEE 01	21	10		ICPES	85KIM 01
17.4	2.2	11	CPXRF	84SIM 01	31	10	6	ICPMS	83DOU 01
17.4	2.2	D	CPXRF	84SIM 02	45		6	ICPMS	83DOU 01
17.5	0.3		FAA	84GLA 02	<u>Fe (ng/g)</u>				
17.6	0.9		FAA	85GAU 04	23	5		FAA	82JEN 02
18	1	11	ICPES	85NIS 01	78	9	14	FAA	84HAR 01
18	2	14	FAA	84HAR 01	80	8		FAA	83JER 01
18	3		FAA	84GLA 11	82	4		ICPES	85HEE 01
18	4	6	ICPMS	83DOU 01	83	6	14	FAA	84HAR 01
18.1	2.9	11	FAA	85SUB 01	84.5	1.8		ICPES	85LAN 02
19	2	14	FAA	84HAR 01	85	2		FAA	83JEN 01
19.8	5.6	11	CPXRF	84SIM 01	86	2		FAA	86GAU 01
20			FAA	82GLA 02	86	7	14	FAA	84HAR 01
20	2	14	FAA	84HAR 01	87			FAA	84SLA 02
20	2.5		ICPES	82DEM 01	88	2.5		ICPES	82DEM 01
20	3		FAA	83JEN 01	88	7	14	FAA	84HAR 01
20	4.2		ICPES	85KIM 01	88	7		FAA	84GLA 02
32		6	ICPMS	83DOU 01	88	16		RTNA	83GRE 01
<u>Cr(III) (ng/g)</u>					88	16		RTNA	82GRE 03
14.9	2.1		ICPES	85COX 01	90			FAA	84GLA 11
					90	5	11	ICPES	85NIS 01
					92	6	11	ICPES	85NIS 01
					100			FAA	82GLA 02

TABLE 1643A-2: INDIVIDUAL DATA FOR NBS SRM 1643A (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Hg (ng/g)</u>					<u>Mo (ng/g)</u>				
<	4		ICPES	85HEE 01	94	16	14	FAA	84HAR 01
0.2			ICPMS	85DAT 01	95	9	14	FAA	84HAR 01
<u>K (ug/g)</u>					95.6	3.1		ICPES	85LAN 02
1.5			FAA	82GLA 02	97	6		FAA	84MOK 01
1.62	0.04		AA	84GLA 02	97	6		RTNA	83GRE 01
1.7	0.3		ICPES	85HEE 01	97	6		RTNA	82GRE 03
1.82			AA	85GAU 04	97	8	11	ICPES	85NIS 01
2.1	0.2	11	ICPES	85NIS 01	98	12	14	FAA	84HAR 01
<u>Li (ng/g)</u>					100	10	11	ICPES	85NIS 01
7			ICPMS	85DAT 01	102	4		RTNA	84MOK 01
<u>Mg (ug/g)</u>					103	4.5		NAA	84FEN 01
2.1	0.3	11	ICPES	85NIS 01	106	5		ICPES	85HEE 01
7.7	0.23		AA	85GAU 04	106	24	14	FAA	84HAR 01
7.8			AA	84GLA 11	108			ICPMS	85DAT 01
7.8	0.13		ICPES	85HEE 01	<u>Na (ug/g)</u>				
7.8	0.2	11	ICPES	85NIS 01	8.9	0.4		AA	85GAU 04
7.8	0.4		AA	84GLA 02	9	0.2		AA	84GLA 02
7.8	0.4	11	ICPES	85NIS 01	9	0.2		FAA	82GLA 02
7.9	0.3		FAA	82GLA 02	9.2	0.5	11	ICPES	85NIS 01
9	0.2		ICPES	85LAN 02	9.6			AA	84GLA 11
<u>Mn (ng/g)</u>					10	0.6	11	ICPES	85NIS 01
10	1		FAA	82JEN 02	12	0.8		ICPES	85HEE 01
24	2.5		RTNA	83JER 01	<u>Ni (ng/g)</u>				
28	2.4		ICPES	85KIM 01	31	3	6	ICPMS	83DOU 01
30	2	11	ICPES	85NIS 01	47	3	6	ICPMS	83DOU 01
30	2	14	FAA	84HAR 01	47	4		FAA	83JEN 01
30.9	0.6		RTNA	83GRE 01	47	10		ICPES	85HEE 01
30.9	0.6		RTNA	82GRE 03	50.4	6.3		ICPES	85LAN 02
31	3		FAA	83JEN 01	51	8	14	FAA	84HAR 01
31.3	0.8		ICPES	82DEM 01	52			FAA	85GAU 04
31.5	2		RTNA	84BEM 01	52	6	14	FAA	84HAR 01
32			FAA	84GLA 11	54	5		FAA	83JER 01
32	0.7		ICPES	85LAN 02	54	7	14	FAA	84HAR 01
32	2	14	FAA	84HAR 01	55			FAA	84GLA 11
32	3	14	FAA	84HAR 01	55	5	11	ICPES	85NIS 01
32	3		FAA	84GLA 02	55	7	14	FAA	84HAR 01
32.5	3.3		FAA	83JER 01	56		6	ICPMS	83DOU 01
33	1		ICPES	85HEE 01	56	1.5		ICPES	82DEM 01
33	1	11	ICPES	85NIS 01	56	8		RTNA	83GRE 01
33.5			FAA	85GAU 04	56	8		RTNA	82GRE 03
34	6	14	FAA	84HAR 01	57			FAA	82GLA 02
					60	3	11	ICPES	85NIS 01
					62	18		ICPES	85KIM 01

TABLE 1643A-2: INDIVIDUAL DATA FOR NBS SRM 1643A (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>NO3 (ug/g)</u>					<u>V (ng/g)</u>				
1			ISE	84GLA 02	44		6	ICPMS	83DOU 01
					50	1		ICPES	85HEE 01
<u>Pb (ng/g)</u>					50	1.3		NAA	84FEN 01
<	50		ICPES	85LAN 02	51.1	4.8		ICPES	85LAN 02
22	5		ICPES	85HEE 01	52	1		RTNA	83GRE 01
24.1	0.8	11	FAA	85SUB 01	52	1		RTNA	82GRE 03
25.2			FAAC	86GAU 01	52	5	14	FAA	84HAR 01
26	2		FAA	82GLA 02	53	1		ITNA	83JER 01
26.8			FAA	86GAU 01	53	1	11	ICPES	85NIS 01
27	1		FAA	83JEN 01	54	1	11	ICPES	85NIS 01
27	2		FAA	85GAU 04	54	8	14	FAA	84HAR 01
27	3		FAAC	85GAU 04	55	10	14	FAA	84HAR 01
27.4			AAC	86GAU 01	56	5	6	ICPMS	83DOU 01
27.6			ICPMS	85DAT 01	56	9	14	FAA	84HAR 01
28	2		FAA	84GLA 02	71	12	6	ICPMS	83DOU 01
28	2		FAA	84GLA 11	<u>Zn (ng/g)</u>				
28	3		FAA	83JER 01	21		6	ICPMS	83DOU 01
28.9	9.1	11	FAA	85SUB 01	57	6		FAA	82JEN 02
29	2		ICPMS	83DOU 02	58	9	14	FAA	84HAR 01
30	38		ICPES	85KIM 01	60	7	6	ICPMS	83DOU 01
41	5		FAA	82JEN 02	61	4.2		ICPES	85KIM 01
<u>Se (ng/g)</u>					62	16	14	FAA	84HAR 01
<	40		ICPES	85HEE 01	63			FAA	85GAU 04
10	1		FAA	84GLA 02	65	2		AA	84GLA 11
11			FAA	84GLA 11	65.1	0.3		FAA	83JEN 01
11			FAA	84SLA 02	66	2		FAA	84GLA 02
11.5	0.5		HAA	81KAH 01	68	1		ICPES	85HEE 01
12			ICPMS	85DAT 01	68	5		RTNA	82GRE 03
12	0.8		FAA	85GAU 04	68	5		RTNA	83GRE 01
35	40		ICPES	85KIM 01	69.7	2.4		ICPES	85LAN 02
<u>Sr (ng/g)</u>					70	5	11	ICPES	85NIS 01
200		6	ICPMS	83DOU 01	70	5	11	ICPES	85NIS 01
206	50	6	ICPMS	83DOU 01	70	7		FAA	83JER 01
220			ICPMS	85DAT 01	70	11	6	ICPMS	83DOU 01
225	32	6	ICPMS	83DOU 01	70	12	14	FAA	84HAR 01
232	5	11	ICPES	85NIS 01	70.2	0.6		ICPES	82DEM 01
236			FAA	84GLA 02	72.5	2		RTNA	84BEM 01
239	5	11	ICPES	85NIS 01	76			FAA	82GLA 02
240	2.5		ICPES	82DEM 01	77	3	6	ICPMS	83DOU 01
246	6		ICPES	85HEE 01	77	7	14	FAA	84HAR 01
<u>U (ng/g)</u>									
<	0.01		RTNA	84BEM 01					

TABLE 1643B-1: COMPILED DATA FOR NBS SRM 1643B TRACE ELEMENTS IN WATER (revised 3/1/86)

ELE	UNITS	NBS	CONSENSUS		MEDIAN	RANGE	AA		OTHER METHODS	
		Mean \pm SD	Mean \pm	SD (n)			Mean \pm	SD (n)	Mean (n)	Method
Ag	ng/g	9.8 \pm 0.8	10.6	(1)	---	---	10.6	(1)	---	
As	ng/g	49	50	(2)	---	46 - 54	50	(2)	---	
B	ng/g	94	---		---	---	---		---	
Ba	ng/g	44 \pm 2	42	(2)	---	41 - 43	42	(2)	---	
Be	ng/g	19 \pm 2	---		---	---	---		---	
Bi	ng/g	11	---		---	---	---		---	
Ca	ug/g	35	33	(2)	---	31 - 35	35	(1)	31 (1)	TITR
Cd	ng/g	20 \pm 1	20.0 \pm 1.2	(4)	19.4	18.8 - 21.7	19.7	(2)	18.8 (1)	AAC
Cd	ng/g	---	---		---	---	---		21.7 (1)	FAAC
Co	ng/g	26 \pm 1	---		---	---	---		---	
Cr	ng/g	18.6 \pm 0.4	18.4	(2)	---	17.6 - 19.2	18.4	(2)	---	
Cu	ng/g	21.9 \pm 0.4	21.7	(2)	---	19.4 - 24	21.7	(2)	---	
Fe	ng/g	99 \pm 8	98.4	(2)	---	97.7 - 99.2	97.7	(1)	99.2 (1)	IDMS
K	ug/g	3	---		---	---	---		---	
Mg	ug/g	15	---		---	---	---		---	
Mn	ng/g	28 \pm 2	26.7 \pm 1.6	(3)	27.2	25 - 28	26.7 \pm 1.6	(3)	---	
Mo	ng/g	85 \pm 3	---		---	---	---		---	
Na	ug/g	8	---		---	---	---		---	
Ni	ng/g	49 \pm 3	69	(1)	---	---	69	(1)	---	
Pb	ng/g	23.7 \pm 0.7	24 \pm 3	(4)	22	21 - 27	25.8	(2)	21 (1)	AAC
Pb	ng/g	---	---		---	---	---		22 (1)	FAAC
Se	ng/g	9.7 \pm 0.5	9.1	(2)	---	9 - 9.2	9.1	(2)	---	
Sr	ng/g	227 \pm 6	---		---	---	---		---	
Tl	ng/g	8.0 \pm 0.2	---		---	---	---		---	
V	ng/g	45.2 \pm 0.4	---		---	---	---		---	
Zn	ng/g	66 \pm 2	68.2	(2)	---	66 - 70.5	68.2	(2)	---	

TABLE 1643B-2: INDIVIDUAL DATA FOR NBS SRM 1643B (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ag (ng/g)</u>					<u>Fe (ng/g)</u>				
10.6	1.1		FAA	86GAU 01	97.7	6.4		FAA	86GAU 01
					99.2	2.5		IDMS	84FAS 01
<u>As (ng/g)</u>					<u>Mn (ng/g)</u>				
46	16		FAA	86GAU 01	25	2		FAA	85GAU 04
54	5		FAA	85GAU 04	27.2			AA	86GAU 01
<u>Ba (ng/g)</u>					28	3.5		FAA	86GAU 01
41	4		FAA	86GAU 01	<u>Ni (ng/g)</u>				
43			FAA	85GAU 04	69			FAA	85GAU 04
<u>Ca (ug/g)</u>					<u>Pb (ng/g)</u>				
31	2		TITR	85GAU 04	21			AAC	86GAU 01
35			AA	85GAU 04	22			FAAC	86GAU 01
<u>Cd (ng/g)</u>					24.5	1.2		FAA	86GAU 01
18.8			AAC	86GAU 01	27	3		FAA	85GAU 04
19.4	0.6		FAA	86GAU 01	<u>Se (ng/g)</u>				
20			FAA	85GAU 04	9	1.1		FAA	86GAU 01
21.7			FAAC	86GAU 01	9.2	1.4		FAA	85GAU 04
<u>Cr (ng/g)</u>					<u>Zn (ng/g)</u>				
17.6	1.1		FAA	86GAU 01	66	3		FAA	85GAU 04
19.2	1.8		FAA	85GAU 04	70.5	2.1		AA	86GAU 01
<u>Cu (ng/g)</u>									
19.4	1.5		AA	86GAU 01					
24	8		FAA	85GAU 04					

TABLE 1645-1: COMPILED DATA FOR NBS SRM 1645 RIVER SEDIMENT (revised 3/1/86)

ELE	UNITS	NBS		CONSENSUS		MEDIAN		RANGE		AA		NAA		ICPES		XRF		OTHER METHODS	
		Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)
Ag	ug/g	---	(1)	1.75	(1)	---	---	---	---	---	---	---	---	---	---	---	---	1.75	(1) IDMS
Al	%	2.26 \pm 0.04	(9)	2.20 \pm 0.25	(9)	2.14	(1)	1.4 - 2.54	(1)	2.42	(1)	2.45	(2)	1.9 \pm 0.6	(5)	1.90	(2)	1.4	(1) DCPES
As	ug/g	66	(19)	67 \pm 3	(19)	66	(6)	62.6 - 75	(6)	66.0 \pm 1.6	(6)	67 \pm 4	(4)	66 \pm 3	(6)	85	(2)	87	(1) PAA
As	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	71.3	(1) DCPES
As	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	47	(1) AF
As	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	65	(1) FAE
B	ug/g	---	(1)	31	(1)	---	---	---	---	---	---	---	---	---	---	---	---	31	(1) TCGS
Ba	ug/g	---	(4)	374 \pm 26	(4)	370	(1)	340 - 400	(1)	---	(3)	340	(1)	385 \pm 15	(3)	---	---	---	---
Be	ug/g	---	(1)	1.0	(1)	---	---	---	---	---	(1)	---	---	1.0	(1)	---	---	---	---
Bi	ng/g	---	(1)	600	(1)	---	---	---	---	---	---	---	---	---	---	---	---	600	(1) AF
COO	g/kg	149.4 \pm 9	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Ca	%	2.9	(14)	2.65 \pm 0.34	(14)	2.62	(2)	2.00 - 3.11	(2)	2.6	(2)	2.73	(1)	2.5 \pm 0.3	(7)	2.8 \pm 0.4	(3)	2.93	(1) PAA
Cd	ug/g	10.2 \pm 1.5	(25)	10.0 \pm 0.7	(25)	10	(10)	8.9 - 11.4	(10)	9.6 \pm 0.8	(10)	9.55	(2)	10.2 \pm 1.0	(9)	---	---	11	(1) PAA
Cd	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	9.1	(1) IDMS
Cd	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	10.3 \pm 0.2	(3) AF
Cd	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	11.4	(1) AE-AF
Ce	ug/g	---	(2)	24	(2)	---	---	20 - 28	---	---	---	---	---	---	---	---	---	24	(2) PAA
Co	ug/g	10.1 \pm 0.6	(10)	9.4 \pm 1.9	(10)	8.5	(2)	6.7 - 12.8	(2)	6.95	(2)	8.8 \pm 1.0	(3)	11.2 \pm 1.1	(4)	---	---	8.5	(1) PAA
Co-60	pci/g	---	---	< 0.06	---	---	---	---	---	---	---	---	---	---	---	---	---	< 0.06	GAMMA
Cr	%	2.96 \pm 0.28	(30)	2.93 \pm 0.31	(30)	2.91	(5)	2.1 - 3.52	(5)	2.92 \pm 0.18	(5)	3.17 \pm 0.15	(7)	2.6 \pm 0.4	(13)	3.16 \pm 0.36	(4)	2.64	(2) PAA
Cr	%	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2.1	(1) DCPES
Cs	ug/g	---	(3)	2.8 \pm 0.5	(3)	2.69	---	2.32 - 3.3	---	---	---	2.8 \pm 0.5	(3)	---	---	---	---	---	---
Cs-137	pci/g	---	---	< 0.05	---	---	---	---	---	---	---	---	---	---	---	---	---	< 0.05	GAMMA
Cu	ug/g	109 \pm 19	(30)	108 \pm 11	(30)	108	(7)	84 - 128	(7)	109 \pm 12	(7)	124	(2)	108 \pm 8	(10)	107 \pm 21	(4)	106	(1) PAA
Cu	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	104	(2) ASV
Cu	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	102	(1) DCPES
DY	ug/g	---	(1)	2.0	(1)	---	---	---	---	---	---	---	---	---	---	---	---	2.0	(1) DCPES
Eu	ug/g	---	(2)	0.50	(2)	---	---	0.31 - 0.70	---	---	---	0.31	(1)	0.7	(1)	---	---	---	---
F	ug/g	900	(2)	1540	(2)	---	---	1336 - 1740	---	---	---	---	---	---	---	---	---	1538	(2) ISE
Fe	%	11.3 \pm 1.2	(26)	10.2 \pm 1.3	(26)	10.4	(4)	7.7 - 12.9	(4)	10.8 \pm 0.9	(4)	9.5	(2)	10.2 \pm 1.4	(13)	10.4 \pm 1.5	(5)	10.51	(1) PAA
Fe	%	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.9	(1) DCPES

TABLE 1645-1: COMPILED DATA FOR NBS SRM 1645 RIVER SEDIMENT (cont.)

ELE	UNITS	NBS Mean \pm SD	CONSENSUS		MEDIAN	RANGE		AA		NAA		ICPES		XRF		OTHER METHODS	
			Mean \pm SD	(n)		Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)
Ga	ug/g	---	41 \pm 23	(4)	38	14 - 71	---	---	---	---	---	38	(1)	55.5	(2)	14	(1) DCPES
Gd	ug/g	---	1.06	(2)	---	0.96 - 1.16	---	---	---	---	---	---	---	---	---	1.06	(2) TCGS
Hf	ug/g	---	1.39	(1)	---	---	---	---	---	1.39	(1)	---	---	---	---	---	---
Hg	ug/g	1.1 \pm 0.5	0.99 \pm 0.21	(12)	0.949	0.67 - 1.30	0.96 \pm 0.19	(5)	1.07 \pm 0.17	(4)	0.83	(1)	---	---	---	1.3	(1) PAA
Hg	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0.55	(2) AF
In	ng/g	---	< 790	---	---	---	---	---	< 790	---	---	---	---	---	---	---	---
K	%	1.26 \pm 0.05	1.02 \pm 0.25	(8)	0.893	0.608 - 1.40	---	---	---	---	---	1.05 \pm 0.18	(3)	1.0 \pm 0.3	(5)	---	---
K-40	pCi/g	---	11.36	(2)	---	11.36 - 11.36	---	---	---	---	---	---	---	---	---	11.36	(1) GAMMA
LOI	%	10.72 \pm 0.28	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
La	ug/g	9	24	(2)	---	15 - 33	---	---	---	---	---	15	(1)	---	---	33	(1) DCPES
Mg	%	0.74 \pm 0.02	0.72 \pm 0.08	(12)	0.684	0.603 - 0.843	0.75	(1)	0.603	(1)	0.73 \pm 0.09	(9)	---	---	---	0.684	(1) PAA
Mn	ug/g	785 \pm 97	752 \pm 34	(20)	750	700 - 838	744 \pm 30	(4)	762	(1)	777 \pm 54	(9)	---	700	(1)	750	(1) PAA
Mn	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	770	(1) DCPES
Mn	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	746	(1) AE-AF
Mo	ug/g	---	34 \pm 8	(3)	37	25 - 40	---	---	---	---	37	(1)	---	---	---	25	(1) PAA
Mo	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	40	(1) DCPES
N (Kjeldahl)	ug/g	797 \pm 48	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Na	ug/g	5400 \pm 100	5100 \pm 600	(8)	5200	4100 - 5600	3200	(1)	5600	(1)	5040 \pm 640	(5)	---	4700	(1)	5450	(1) PAA
Nb	ug/g	---	16	(2)	---	1.4 - 30	---	---	---	---	---	---	---	---	---	1.4	(1) PAA
Nb	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	30	(1) DCPES
Ni	ug/g	45.8 \pm 2.9	46 \pm 5	(27)	46	33 - 57.8	43 \pm 2	(5)	55	(1)	50 \pm 5	(9)	---	37 \pm 10	(5)	46	(1) DCPES
Ni	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	47.4 \pm 0.7	(4) PAA
Ni	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	37.6	(1) AE-AF
Oil&Gr %	ug/g	1.71 \pm 0.26	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
P	ug/g	510 \pm 10	470 \pm 40	(4)	452	429 - 527	---	---	---	---	447 \pm 16	(3)	---	---	---	527	(1) DCPES
Pb	ug/g	714 \pm 28	710 \pm 29	(29)	705	631 - 771	701 \pm 18	(11)	---	---	705 \pm 47	(10)	---	720 \pm 14	(4)	724	(1) PAA
Pb	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	631	(1) AF
Pb	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	708	(2) ASV
Pb	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	771	(1) AE-AF
Pd	ng/g	---	1.0	(1)	---	---	---	---	---	---	---	---	---	---	---	1.0	(1) IDMS

TABLE 1645-1: COMPILED DATA FOR NBS SRM 1645 RIVER SEDIMENT (cont.)

ELE	UNITS	NBS		CONSENSUS		MEDIAN	RANGE	AA		NAA		ICPES		XRF		OTHER METHODS			
		Mean ±	SD	Mean ±	SD			(n)	Mean ±	SD	(n)	Mean ±	SD	(n)	Mean ±	SD	(n)	Mean ±	SD
Pr	ug/g	---	---	14	---	(1)	---	---	---	---	---	14	(1)	---	---	---	---	---	---
Ra-226	pCi/g	---	---	0.86	---	(2)	0.86 - 0.86	---	---	---	---	---	---	---	---	---	0.86	(1)	GAMMA
Rb	ug/g	---	---	41 ± 4	---	(6)	38 - 50	---	---	45.7	(2)	---	---	38.7 ± 0.6	(3)	40	(1)	PAA	
S	%	1.1	---	4.35	---	(2)	3.68 - 5.02	---	---	---	---	---	---	4.35	(2)	---	---	---	
Sb	ug/g	51	---	31 ± 6	---	(11)	21.7 - 47.2	33 ± 10	(4)	31 ± 7	(7)	38	(1)	---	---	52	(1)	PAA	
Sc	ug/g	2.0	---	2.6	---	(2)	2.13 - 3.1	---	---	2.6	(2)	---	---	---	---	---	---	---	
Se	ug/g	1.5	---	1.27 ± 0.35	---	(5)	0.85 - 5	1.7	(1)	1.2 ± 0.3	(3)	3	(2)	---	---	---	---	---	
Se(IV)	ug/g	---	---	0.02	---	(1)	---	0.02	(1)	---	---	---	---	---	---	---	---	---	
Se(VI)	ug/g	---	---	0.08	---	(1)	---	0.08	(1)	---	---	---	---	---	---	---	---	---	
Si	%	---	---	23.3 ± 2.7	---	(5)	19.7 - 27.27	23.6	(1)	27.27	(1)	22.2	(1)	19.7	(1)	23.7	(1)	DCPES	
Sm	ug/g	---	---	1.24	---	(2)	1.22 - 1.26	---	---	---	---	---	---	---	---	1.24	(2)	TCGS	
Sn	ug/g	---	---	360 ± 50	---	(3)	313 - 416	340	(2)	416	(1)	---	---	---	---	---	---	---	
Sr	ug/g	---	---	880 ± 90	---	(8)	747 - 1033	---	---	---	---	920 ± 240	(3)	943 ± 70	(4)	856	(2)	PAA	
Ta	ng/g	---	---	220	---	(1)	---	---	---	220	(1)	---	---	---	---	---	---	---	
Te	ug/g	---	---	4.6	---	(1)	---	---	---	---	---	---	---	---	---	4.6	(1)	IDMS	
Th	ug/g	1.62 ± 0.22	---	18 ± 16	---	(3)	1.8 - 34	---	---	---	---	---	---	26.5	(2)	1.8	(1)	PAA	
Ti	ug/g	---	---	500 ± 160	---	(10)	245 - 700	700	(1)	---	---	410 ± 180	(6)	374	(2)	734	(2)	PAA	
Ti	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	600	(1)	DCPES	
Tl	ug/g	1.44 ± 0.07	---	3.65	---	(2)	1.9 - 5.4	5.4	(1)	---	---	---	---	---	---	1.9	(1)	PAA	
U	ug/g	1.11 ± 0.05	---	1.15 ± 0.19	---	(7)	0.8 - 1.4	---	---	1.11 ± 0.17	(6)	---	---	---	---	1.4	(1)	PAA	
V	ug/g	23.5 ± 6.9	---	26 ± 4	---	(13)	17.9 - 34	19.8	(2)	29	(1)	27 ± 3	(8)	26	(1)	34	(1)	DCPES	
W	ug/g	---	---	54	---	(1)	---	---	---	---	---	---	---	---	---	54	(1)	DCPES	
Y	ug/g	---	---	7.2	---	(2)	7 - 7.4	---	---	---	---	7	(1)	---	---	7.4	(1)	PAA	
Yb	ng/g	---	---	600	---	(1)	---	---	---	---	---	600	(1)	---	---	---	---	---	
Zn	ug/g	1720 ± 170	---	1700 ± 110	---	(31)	1414 - 1878	1710 ± 80	(5)	1610	(2)	1720 ± 90	(9)	1610 ± 210	(6)	1635	(2)	PAA	
Zn	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1720	(1)	AE-AF	
Zn	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1760 ± 30	(3)	AF	
Zn	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1500	(1)	DCPES	
Zr	ug/g	---	---	61 ± 9	---	(3)	55 - 71	---	---	---	---	---	---	---	---	63	(2)	PAA	
Zr	ug/g	---	---	---	---	---	---	---	---	---	---	---	---	---	---	57	(1)	DCPES	

TABLE 1645-2: INDIVIDUAL DATA FOR NBS SRM 1645 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ag (ug/g)</u>					<u>Ba (ug/g)</u>				
1.75			IDMS	83LOS 01	178	15		PAA	80KAT 01
					340	50	35	ITNA	81GLA 02
					370	36	11	ICPES	84NAD 01
					385	42	11	ICPES	84NAD 01
					400			ICPES	80FLO 01
<u>Al (%)</u>					<u>Be (ug/g)</u>				
0.5			ICPES	84SUN 01					
0.66			ICPES	84SUN 01					
0.9		11	ICPES	84WOL 01					
1.4	0.1		DCPES	81CAN 01					
1.68		6	EXRF	84JEN 01	1			ICPES	80FLO 01
2.09	0.32	11	ICPES	84NAD 01					
2.11		6	EXRF	84JEN 01					
2.14			ICPES	84SUN 01					
2.18	0.028		ICPES	84HIR 01		< 100		FAA	82MAT 02
2.23	0.11	11	ICPES	84NAD 01	600			AF	85NAR 02
2.37	0.04	35	ITNA	81GLA 02					
2.42	0.12		AA	81FAR 01					
2.5392	0.1587		ITNA	85PEN 01					
3.9			ICPES	80FLO 01					
6.9		11	ICPES	84WOL 01					
23.8		11	ICPES	84WOL 01					
<u>As (ug/g)</u>					<u>Ca (%)</u>				
47			AF	85NAR 02	2		11	ICPES	84WOL 01
62.6	2.1		RTNA	82ELS 02	2.3			ICPES	84SUN 01
63			ICPES	85NAR 02	2.3	0.1		AA	83CAR 01
64	3.6		FAA	85FAN 01	2.33		6	XRF	78TAK 01
65		11	FAA	83XIA 01	2.39	0.06	11	ICPES	84NAD 01
65	1		ICPES	84LIV 01	2.6		11	ICPES	84WOL 01
65	1		FAE	80DSI 01	2.62	0.06	11	ICPES	84NAD 01
66			HAA	80AGE 03	2.73	0.15	35	ITNA	81GLA 02
66		11	FAA	83XIA 01	2.8			ICPES	84SUN 01
66	5		IENA	82GLA 02	2.9	0.13		AA	81FAR 01
66	13	11	ICPES	84NAD 01	2.93	0.01		PAA	80KAT 01
66.4			ICPES	81GOU 01	3			ICPES	84SUN 01
66.6	4.3		FAA	83LOV 01	3.1			EXRF	83MAH 03
67			ICPES	82NYG 01	3.106		6	XRF	78TAK 01
68			IENA	84GLA 02	4.1		11	ICPES	84WOL 01
68.7	4.1		FAA	83CAR 01	4.2			ICPES	80FLO 01
71			ICPES	80FLO 01	4.59		6	EXRF	84JEN 01
71.3	1.3		DCPES	84URA 01	6.55		6	EXRF	84JEN 01
72			ITNA	81SLO 01					
75			WXRf	84ZSO 01					
87			PAA	80BER 01					
95		6	EXRF	84JEN 01					
172		6	EXRF	84JEN 01					
<u>B (ug/g)</u>					<u>Cd (ug/g)</u>				
31	3		TCGS	84GLA 01	7.2	0.4	11	FAA	83CAR 01
					7.6	0.4		AA	83CAR 01
					8.9	0.4		RTNA	80VAL 01
					8.9	0.8		ICPES	84MAR 01
					9			ICPES	84SUN 01
					9.1	0.3		IDMS	80ROS 01
					9.2	0.5		FAA	81FAR 01
					9.3	0.1	11	AA	82SAK 01
					9.4		11	FAA	83CAR 01
					9.5			ICPES	84SUN 01
					9.55	0.22	11	AA	82SAK 01
					9.8		11	AA	84WOL 01

TABLE 1645-2: INDIVIDUAL DATA FOR NBS SRM 1645 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Cd (ug/g) cont.</u>					<u>Cr (%)</u>				
10		11	AA	84WOL 01	1.88	0.27	11	ICPES	84NAD 01
10			ICPES	84SUN 01	1.98	0.24	11	ICPES	84NAD 01
10			ICPES	80FLO 01	2			ICPES	84SUN 01
10.1		6	AF	84NAR 02	2.1	0.2		DCPES	81CAN 01
10.1	0.6	11	AA	83HSU 01	2.29	0.08		PAA	80KAT 01
10.2	0.4		RTNA	79DER 01	2.5	0.4		RTNA	77MEL 01
10.25			AF	85NAR 02	2.66			EXRF	83MAH 03
10.3		11	AA	84WOL 01	2.67	0.03		ICPES	84HIR 01
10.5		6	AF	84NAR 02	2.7		11	ICPES	84WOL 01
10.5	0.4	11	AA	83HSU 01	2.7	0.2		FAA	83CAR 01
10.8			ICPES	85NAR 02	2.8			ICPES	84SUN 01
10.8	2		ICPES	82SCH 04	2.8	0.17		AA	83CAR 01
11			PAA	80BER 01	2.85			ICPES	84SUN 01
11.2		6	ICPES	83CHA 01	2.88		6	ICPES	83CHA 01
11.4	4.3		AE-AF	82GOL 01	2.9		11	ICPES	84WOL 01
11.98		6	ICPES	83CHA 01	2.91	0.01	11	AA	82SAK 01
<u>Ce (ug/g)</u>					2.91	0.24		ICPES	82SCH 04
20	0.6		PAA	80KAT 01	2.93		6	ICPES	83CHA 01
28			PAA	80BER 01	2.97	0.125	11	RTNA	76STE 01
120	10		DCPES	81CAN 01	2.98			PAA	80BER 01
<u>Co (ug/g)</u>					2.99	0.13	35	ITNA	81GLA 02
6.7	0.5	11	FAA	83CAR 01	3		11	ICPES	84WOL 01
7.2		11	FAA	83CAR 01	3	0.27	11	AA	82SAK 01
8	0.2	35	ITNA	81GLA 02	3.02			ICPES	80FLO 01
8.4	0.7		RTNA	77MEL 01	3.15	0.147	11	RTNA	76STE 01
8.5	0.3		PAA	80KAT 01	3.16	0.152	11	RTNA	76STE 01
9.96	0.12		RTNA	79DER 01	3.18	0.08		AA	81FAR 01
10.4			ICPES	84SUN 01	3.19	0.038	6	XRF	80IWA 01
10.8			ICPES	84SUN 01	3.25	0.049	6	XRF	80IWA 01
11			ICPES	80FLO 01	3.25	0.152	11	RTNA	76STE 01
12.8			ICPES	84SUN 01	3.2706	0.155		ITNA	76STE 01
15.6	0.6		ICPES	84HIR 01	3.4	0.148	11	RTNA	76STE 01
24			PAA	80BER 01	3.52		6	XRF	78TAK 01
<u>Co-60 (pCi/g)</u>					4.17		6	EXRF	84JEN 01
<	0.06		UU	84MEL 01	6.28		6	EXRF	84JEN 01
<	0.06		GAMMA	84KRI 01	<u>Cs (ug/g)</u>				
					2.32	0.13	35	ITNA	81GLA 02
					2.69	0.14		ITNA	84GLA 11
					3.3	0.2		RTNA	77MEL 01
					<u>Cs-137 (pCi/g)</u>				
					<	0.05		GAMMA	84KRI 01
					<	0.05		UU	84MEL 01

TABLE 1645-2: INDIVIDUAL DATA FOR NBS SRM 1645 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Cu (ug/g)</u>					<u>Fe (%)</u>				
78		6	XRF	78TAK 01	7.7			ICPES	84SUN 01
84		6	ICPES	83CHA 01	7.9	0.4		DCPES	81CAN 01
90		6	ICPES	83CHA 01	8.372		6	XRF	78TAK 01
90.9	11.2		AA	84KAN 01	8.5	0.5		RTNA	77MEL 01
96	14		ASV	81DOG 01	8.8		11	ICPES	84WOL 01
98		11	VV	84WOL 01	9.05	0.19	11	ICPES	84NAD 01
100	20		AA	77YAN 01	9.25	0.11	11	ICPES	84NAD 01
101		11	VV	84WOL 01	9.5		11	ICPES	84WOL 01
101	4.2		ICPES	84HIR 01	9.7	0.5		AA	83CAR 01
102	8		DCPES	81CAN 01	9.74	0.12		ICPES	84HIR 01
103	8		FAA	83CAR 01	9.89		6	XRF	78TAK 01
105			ICPES	84SUN 01	10.3			ICPES	84SUN 01
105	14		ICPES	82SCH 04	10.4		6	XRF	78TAK 01
106			PAA	80BER 01	10.4			ICPES	84SUN 01
108		6	XRF	78TAK 01	10.5	0.3	35	ITNA	81GLA 02
108		11	VV	84WOL 01	10.51	0.18		PAA	80KAT 01
108	5	11	ICPES	84NAD 01	10.6	0.3		AA	81FAR 01
108	11		ICPES	84SOB 01	11		6	ICPES	83CHA 01
109	6		AA	83CAR 01	11.2			EXRF	83MAH 03
111	5		ASV	83MAD 01	11.2	0.6	11	AA	82SAK 01
111	7		FAA	81FAR 01	11.4	1.3		ICPES	82SCH 04
112			ICPES	84SUN 01	11.5			ICPES	80FLO 01
112			ICPES	84SUN 01	11.5		6	ICPES	83CHA 01
113		6	XRF	78TAK 01	11.8	0.2	11	AA	82SAK 01
115	7	11	ICPES	84NAD 01	12.3		6	EXRF	84JEN 01
119			ICPES	80FLO 01	12.9		11	ICPES	84WOL 01
123	6		RTNA	79DER 01	20.1		6	EXRF	84JEN 01
124	4	11	AA	82SAK 01	<u>Ga (ug/g)</u>				
125	3	11	AA	82SAK 01	14	1		DCPES	81CAN 01
125.2	8.2		RTNA	80VAL 01	38			ICPES	80FLO 01
128			WXRF	84ZSO 01	40		6	EXRF	84JEN 01
190	66		EXRF	83MAH 03	71		6	EXRF	84JEN 01
213		6	EXRF	84JEN 01	<u>Gd (ug/g)</u>				
379		6	EXRF	84JEN 01	0.96	0.14	4	TCGS	85GLA 05
<u>Dy (ug/g)</u>					1.16	0.15	4	TCGS	85GLA 05
2	0.2		DCPES	81CAN 01	<u>Hf (ug/g)</u>				
<u>Eu (ug/g)</u>					1.39	0.07	35	ITNA	81GLA 02
0.31	0.03	35	ITNA	81GLA 02					
0.7			ICPES	80FLO 01					
<u>F (ug/g)</u>									
1336	97		ISE	83BET 02					
1740	60		ISE	83KNA 01					

TABLE 1645-2: INDIVIDUAL DATA FOR NBS SRM 1645 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Hg (ug/g)</u>					<u>Mg (%) cont.</u>				
0.4		6	AF	84NAR 02	0.75	0.02		AA	81FAR 01
0.67	0.07		FAA	83CAR 01	0.78			ICPES	84SUN 01
0.7		6	AF	84NAR 02	0.82			ICPES	84SUN 01
0.83	0.05		ICPES	84MAR 01	0.84			ICPES	84SUN 01
0.85	0.036		CVAA	80NAD 01	0.8426		11	ICPES	84WOL 01
0.937	0.36		RTNA	84DEL 01	2.1	0.1		AA	83CAR 01
0.949	0.055		RTNA	84DRA 01	2.3			XRF	83CAR 01
1.05	0.19		CVAA	81KAH 01	4.1			ICPES	80FLO 01
1.1	0.04		CVAA	83CAR 01	<u>Mn (ug/g)</u>				
1.1	0.1		RTNA	77MEL 01	700			EXRF	83MAH 03
1.11	0.26		CVAA	80WHI 01	707	7.2		ICPES	84HIR 01
1.3			PAA	80BER 01	710	40	11	ICPES	84NAD 01
1.3	0.2		RTNA	80VAL 01	716	110	11	AA	82SAK 01
<u>In (ng/g)</u>					721		11	VV	84WOL 01
<	790		RTNA	83BER 01	723	77	11	AA	82SAK 01
<u>K (%)</u>					735		11	VV	84WOL 01
0.04			ICPES	84SUN 01	746	130		AE-AF	82GOL 01
0.09	0.002		AA	83CAR 01	750			ICPES	80FLO 01
0.15			ICPES	84SUN 01	750		11	VV	84WOL 01
0.608		6	EXRF	84JEN 01	750	18		PAA	80KAT 01
0.857		6	EXRF	84JEN 01	756	15		AA	83CAR 01
0.87	0.12	11	ICPES	84NAD 01	760	30	11	ICPES	84NAD 01
0.893		6	XRF	78TAK 01	762	9	35	ITNA	81GLA 02
1.06	0.13	11	ICPES	84NAD 01	768	85		ICPES	82SCH 04
1.22			ICPES	84SUN 01	770	30		DCPES	81CAN 01
1.24		6	XRF	78TAK 01	780	90		AA	81FAR 01
1.4			EXRF	83MAH 03	793	52		ICPES	84SOB 01
<u>K-40 (pCi/g)</u>					798			ICPES	84SUN 01
11.36			UU	84MEL 01	838			ICPES	84SUN 01
11.36			GAMMA	84KRI 01	870			ICPES	84SUN 01
<u>La (ug/g)</u>					1460		6	XRF	78TAK 01
15			ICPES	80FLO 01	3321		6	XRF	78TAK 01
33	3		DCPES	81CAN 01	<u>Mo (ug/g)</u>				
<u>Mg (%)</u>					25			PAA	80BER 01
0.603	0.1809		ITNA	85PEN 01	37	1.9		ICPES	84HIR 01
0.62	0.16	11	ICPES	84NAD 01	40	2		DCPES	81CAN 01
0.65	0.02	11	ICPES	84NAD 01	<u>Na (ug/g)</u>				
0.67	0.0092		ICPES	84HIR 01	1600			ICPES	84SUN 01
0.6823		11	ICPES	84WOL 01	2050			ICPES	84SUN 01
0.684	0.01		PAA	80KAT 01	3200	100		AA	83CAR 01
0.7095		11	ICPES	84WOL 01	4100	500	11	ICPES	84NAD 01
					4700			XRF	83CAR 01
					4700	400	11	ICPES	84NAD 01
					5200			ICPES	84SUN 01
					5450	110		PAA	80KAT 01
					5600		6	ICPES	83CHA 01
					5600		6	ICPES	83CHA 01
					5600	200	35	ITNA	81GLA 02

TABLE 1645-2: INDIVIDUAL DATA FOR NBS SRM 1645 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Nb (ug/g)</u>					<u>Pb (ug/g) cont.</u>				
1.4	0.07		PAA	80KAT 01	684	35		FAA	83CAR 01
30	3		DCPES	81CAN 01	685		11	AA	84WOL 01
					685	10	11	AA	82SAK 01
<u>Ni (ug/g)</u>					693			ICPES	85NAR 02
28		6	XRF	78TAK 01	695	45		ASV	81DOG 01
30		6	XRF	78TAK 01	701		6	ICPES	83CHA 01
33		6	XRF	78TAK 01	704		6	ICPES	83CHA 01
37.6	6.4		AE-AF	82GOL 01	705		11	AA	84WOL 01
39.8		11	FAA	83CAR 01	705		6	EXRF	84JEN 01
41	2	11	AA	82SAK 01	705	35		AA	83CAR 01
42	4	11	AA	82SAK 01	717		6	XRF	78TAK 01
43		11	VV	84WOL 01	718	28	11	AA	83HSU 01
44		6	ICPES	83CHA 01	719		6	XRF	78TAK 01
44.7	2.7		AA	83CAR 01	721	20		ICPES	82SCH 04
44.9		11	VV	84WOL 01	721	26	11	AA	83HSU 01
45		11	VV	84WOL 01	722	18		ASV	83MAD 01
45			ICPES	80FLO 01	724			PAA	80BER 01
45.8	2.8	11	FAA	83CAR 01	724	43	11	AA	82SAK 01
46	4		DCPES	81CAN 01	725		11	ICPES	80FLO 01
46.1	2.5		ICPES	82SCH 04	725			AA	84WOL 01
46.6	4.6		PAA	78MAS 01	732			ICPES	84SUN 01
47			ICPES	84SUN 01	740			EXRF	83MAH 03
47	3		PAA	80KAT 01	745			ICPES	84SUN 01
48			PAA	80BER 01	768			ICPES	84SUN 01
48		6	EXRF	84JEN 01	771	231		AE-AF	82GOL 01
48			PAA	78KAT 01	1019		6	XRF	78TAK 01
48			WXRF	84ZSO 01	1270		6	EXRF	84JEN 01
50		6	ICPES	83CHA 01	<u>Pd (ng/g)</u>				
52			ICPES	84SUN 01	1			IDMS	83LOS 01
53			ICPES	84SUN 01	<u>Pr (ug/g)</u>				
55	2.4		ICPES	84HIR 01	14			ICPES	80FLO 01
55	3		RTNA	77MEL 01	<u>Ra-226 (pCi/g)</u>				
57.8	7.7		ICPES	84SOB 01	0.86			UU	84MEL 01
85		6	EXRF	84JEN 01	0.86			GAMMA	84KRI 01
<u>P (ug/g)</u>					<u>Rb (ug/g)</u>				
429	9	11	ICPES	84NAD 01	38		6	XRF	78TAK 01
452	27		ICPES	84HIR 01	39		6	EXRF	84JEN 01
459	31	11	ICPES	84NAD 01	39		6	XRF	78TAK 01
526.9	6.4		DCPES	84URA 01	40	2		PAA	80KAT 01
<u>Pb (ug/g)</u>					41.4	0.5		RTNA	77MEL 01
538	39	11	ICPES	84NAD 01	50	7	35	ITNA	81GLA 02
597	40	11	ICPES	84NAD 01	70		6	EXRF	84JEN 01
631			AF	85NAR 02					
670	22		ICPES	84MAR 01					
680	20		AA	77YAN 01					
683	29		FAA	81FAR 01					

TABLE 1645-2: INDIVIDUAL DATA FOR NBS SRM 1645 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>S (%)</u>					<u>Si (%)</u>				
3.68		6	EXRF	84JEN 01	15.4		6	EXRF	84JEN 01
5.02		6	EXRF	84JEN 01	19.7		6	EXRF	84JEN 01
<u>Sb (ug/g)</u>					22.2	1.1	11	ICPES	84NAD 01
5.9			AF	85NAR 02	23.6			AA	83FAR 01
21.7			RTNA	81NIS 01	23.7	1.9		DCPES	81CAN 01
22.6			RTNA	81KIB 01	27.2728	2.1949		ITNA	85PEN 01
25			HAA	81YAM 01	<u>Sm (ug/g)</u>				
28.3	1.2		FAA	82MAT 02	1.22	0.14	4	TCGS	85GLA 05
31	4		ITNA	81HAM 01	1.26	0.14	4	TCGS	85GLA 05
32.2	3.2	11	FAA	83CAR 01	<u>Sn (ug/g)</u>				
33.2			RTNA	81SLO 01	6			AF	85NAR 02
33.6	2.2		RTNA	82ELS 02	313	9		FAA	82MAT 02
36			ITNA	81SLO 01	366			FAA	84LON 01
38			ICPES	82NYG 01	416	15		RTNA	83BER 01
40	5	35	ITNA	81GLA 02	<u>Sr (ug/g)</u>				
47.2		11	FAA	83CAR 01	747	38	11	ICPES	84NAD 01
52			PAA	80BER 01	814	43	11	ICPES	84NAD 01
66			ICPES	85NAR 02	851	13		PAA	80KAT 01
<u>Sc (ug/g)</u>					862			PAA	80BER 01
<	2		DCPES	81CAN 01	870		6	XRF	78TAK 01
2.13	0.07	35	ITNA	81GLA 02	910			EXRF	83MAH 03
3.1	0.5		RTNA	77MEL 01	960		6	EXRF	84JEN 01
<u>Se (ug/g)</u>					1033		6	XRF	78TAK 01
0.85			RTNA	81SLO 01	1200			ICPES	80FLO 01
1			ICPES	81GOJ 01	1750		6	EXRF	84JEN 01
1.3	0.2		RTNA	77MEL 01	<u>Ta (ng/g)</u>				
1.5	0.1	35	RTNA	81GLA 01	220	20	35	ITNA	81GLA 02
1.7	0.3		HAA	85CUT 01	<u>Te (ug/g)</u>				
5			ICPES	80FLO 01	4.6			IDMS	83LOS 01
8			ICPES	82NYG 01	<u>Th (ug/g)</u>				
9.8			ICPES	85NAR 02	1.8			PAA	80BER 01
24			AF	85NAR 02	19		6	EXRF	84JEN 01
<u>Se(IV) (ug/g)</u>					34		6	EXRF	84JEN 01
0.02	0.01		HAA	85CUT 01	<u>Se(VI) (ug/g)</u>				
<u>Se(VI) (ug/g)</u>					0.08	0.03		HAA	85CUT 01

TABLE 1645-2: INDIVIDUAL DATA FOR NBS SRM 1645 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ti (ug/g)</u>					<u>Y (ug/g)</u>				
184		11	ICPES	84WOL 01	<	7		DCPES	81CAN 01
245		11	ICPES	84WOL 01	7			ICPES	80FLO 01
258		6	XRF	78TAK 01	7.4	0.3		PAA	80KAT 01
370		11	ICPES	84NAD 01					
490		6	XRF	78TAK 01	<u>Yb (ng/g)</u>				
491	14		ICPES	84HIR 01	<	2000		DCPES	81CAN 01
590		11	ICPES	84NAD 01	600			ICPES	80FLO 01
597		11	ICPES	84WOL 01					
600	100		DCPES	81CAN 01	<u>Zn (ug/g)</u>				
642	13		PAA	80KAT 01	1254			EXRF	83MAH 03
700			AA	82MAT 04	1392	10		ICPES	84HIR 01
825			PAA	80BER 01	1414	84		RTNA	77MEL 01
<u>Tl (ug/g)</u>					1480		6	XRF	78TAK 01
<	10		DCPES	81CAN 01	1500	100		DCPES	81CAN 01
1.9			PAA	80BER 01	1540	67		PAA	80KAT 01
5.4	0.5		FAA	83CAR 01	1570	57	11	ICPES	84NAD 01
<u>U (ug/g)</u>					1587			ICPES	80FLO 01
0.8	0.02		RTNA	78DER 01	1610	40		AA	77YAN 01
1.11	0.03		DNA	85GAU 04	1640		6	XRF	78TAK 01
1.11	0.05		DNA	86GAU 01	1640	40		AA	81FAR 01
1.16			DNA	84GLA 02	1660		11	VV	84WOL 01
1.17	0.01		DNA	85GLA 04	1695			WXRF	84ZSO 01
1.3			DNA	84GLA 11	1700			ICPES	84SUN 01
1.4			PAA	80BER 01	1713	145		ICPES	82SCH 04
<u>V (ug/g)</u>					1720	361		AE-AF	82GOL 01
17.9		11	FAA	83CAR 01	1726		11	VV	84WOL 01
21.6	1.5	11	FAA	83CAR 01	1730			PAA	80BER 01
22			ICPES	84SUN 01	1735	37	11	ICPES	84NAD 01
24			ICPES	84SUN 01	1737		6	AF	84NAR 02
24.1	6.5		ICPES	82SCH 04	1750		6	AF	84NAR 02
25			ICPES	80FLO 01	1750	19	11	AA	82SAK 01
26			WXRF	84ZSO 01	1767	177		AA	83CAR 01
27			ICPES	84SUN 01	1768	158		ICPES	84SOB 01
29	6	35	ITNA	81GLA 02	1785			ICPES	85NAR 02
29.6		11	ICPES	84WOL 01	1794			AF	85NAR 02
30.8		11	ICPES	84WOL 01	1794		6	XRF	78TAK 01
31	0.8		ICPES	84HIR 01	1795	25	11	AA	82SAK 01
34	3		DCPES	81CAN 01	1800			ICPES	84SUN 01
39.6		11	ICPES	84WOL 01	1800			ICPES	84SUN 01
<u>W (ug/g)</u>					1806	37		RTNA	79DER 01
54	9		DCPES	81CAN 01	1810		6	EXRF	84JEN 01
<u>Zr (ug/g)</u>					1878		11	VV	84WOL 01
					3240		6	EXRF	84JEN 01
					<u>Zr (ug/g)</u>				
					<	55		EXRF	83MAH 03
					55	3		PAA	80KAT 01
					57	6		DCPES	81CAN 01
					71			PAA	80BER 01

TABLE 1646-1: COMPILED DATA FOR NBS SRM 1646 ESTUARINE SEDIMENT (revised 3/1/86)

ELEMENT	UNITS	NBS		CONSENSUS		MEDIAN	RANGE	NAA		ICPES		OTHER METHODS	
		Mean \pm SD	(n)	Mean \pm SD	(n)			Mean \pm SD	(n)	Mean	(n)	Mean	(n) Method
Ag	ng/g	---		88	(1)	---	---	---		---		88	(1) AA
Al	%	6.25 \pm 0.2	(5)	5.54 \pm 0.42	(5)	5.4	5.12 - 6.03	5.98	(2)	5.12	(1)	5.3	(2) DCPES
As	ug/g	11.6 \pm 1.3	(3)	11.1 \pm 0.6	(3)	11.1	10.5 - 11.7	11.1	(2)	---		11.1	(1) DCPES
B	ug/g	---		82.5	(2)	---	81 - 84	---	(2)	---		82.5	(2) TCGS
Ba	ug/g	---		409	(2)	---	370 - 448	409	(2)	---		---	
Be	ug/g	1.5	(1)	1.5	(1)	---	---	---		1.5	(1)	---	
Br	ug/g	---		117	(2)	---	112 - 122	117	(2)	---		---	
Ca	ug/g	8300 \pm 300	(2)	8440	(2)	---	8120 - 8760	8760	(1)	---		8120	(1) AA
Cd	ng/g	360 \pm 70	(3)	325 \pm 60	(3)	355	260 - 360	---		---		360	(1) IDMS
Cd	ng/g	---		---		---	---	---		---		260	(1) AAC
Cd	ng/g	---		---		---	---	---		---		355	(1) AA
Ce	ug/g	80	(4)	80 \pm 4	(4)	77.2	76 - 84	81 \pm 3	(3)	76	(1)	---	
Cl	%	---		1.38	(1)	---	---	1.38	(1)	---		---	
Co	ug/g	10.5 \pm 1.3	(5)	9.1 \pm 1.6	(5)	8.0	7.8 - 11	9.4 \pm 1.6	(4)	7.8	(1)	---	
Cr	ug/g	76 \pm 3	(7)	76 \pm 4	(7)	75	72 - 84	79 \pm 4	(4)	72	(1)	73	(2) DCPES
Cs	ug/g	3.7	(5)	3.69 \pm 0.10	(5)	3.7	3.6 - 3.85	3.69 \pm 0.10	(5)	---		---	
Cu	ug/g	18 \pm 3	(4)	17 \pm 2	(4)	16.8	13.3 - 19	---		19	(1)	17.8	(1) IDMS
Cu	ug/g	---		---		---	---	---		---		16.8	(1) ASV
Cu	ug/g	---		---		---	---	---		---		13.3	(1) AAC
Dy	ug/g	---		4.3 \pm 1.6	(3)	4.04	2.8 - 5.98	5.98	(1)	4.04	(1)	2.8	(1) DCPES
Er	ug/g	---		2.41	(1)	---	---	---		2.41	(1)	---	
Eu	ug/g	1.5	(3)	1.44 \pm 0.16	(3)	1.36	1.34 - 1.62	1.48	(2)	1.36	(1)	---	
Fe	%	3.35 \pm 0.1	(6)	3.22 \pm 0.28	(6)	3.02	2.9 - 3.52	3.46 \pm 0.07	(3)	3.02	(1)	2.95	(2) DCPES
Ga	ug/g	---		19	(1)	---	---	---		---		19	(1) DCPES
Gd	ug/g	---		4.5 \pm 0.7	(3)	4.6	3.7 - 5.09	---		5.09	(1)	4.15	(2) TCGS
Ge	ug/g	1.4	(3)	---		---	---	---		---		---	
Hf	ug/g	---		11.2	(2)	---	11.1 - 11.2	11.2	(2)	---		---	
Hg	ng/g	63 \pm 12	(2)	---		---	---	---		---		---	
Ho	ug/g	---		0.84	(1)	---	---	---		0.84	(1)	---	
I	ug/g	---		34.2	(2)	---	32.5 - 36	34.2	(2)	---		---	
K	%	1.4	(2)	1.83	(2)	---	1.43 - 2.23	1.83	(2)	---		---	
La	ug/g	---		37 \pm 2	(3)	36	35.7 - 38.9	38.9	(1)	35.7	(1)	36	(1) DCPES
Li	ug/g	49	(1)	46	(1)	---	---	---		---		46	(1) AA
Lu	ng/g	---		380 \pm 60	(3)	370	320 - 444	407	(2)	320	(1)	---	
Mg	%	1.09 \pm 0.08	(3)	0.970 \pm 0.001	(3)	0.97	0.969 - 0.970	0.97	(1)	0.969	(1)	0.97	(1) AA

TABLE 1646-1: COMPILED DATA FOR NBS SRM 1646 ESTUARINE SEDIMENT (cont.)

ELEMENT	UNITS	NBS		MEDIAN	RANGE		NAA		ICPES		OTHER METHODS	
		Mean	SD		Mean	SD	Mean	SD	Mean	(n)	Mean	(n) Method
Mn	ug/g	375 ± 20		328	270 - 385		368 ± 15		328	(1)	275	(2) DCPES
Mo	ug/g	2		---	9 - 19		---		9	(1)	19	(1) DCPES
Na	%	2		2.1	1.82 - 2.19		2.04 ± 0.19		---		---	
Nb	ug/g	---		---	---		---		---		53	(1) DCPES
Nd	ug/g	---		34.7	32.6 - 40		36.3		34.7	(1)	---	
Ni	ug/g	32 ± 3		31	31 - 32.8		---		32	(1)	31	(2) DCPES
Ni	ug/g	---		---	---		---		---		32.8	(1) AAC
P	ug/g	540 ± 5		---	433 - 529.6		---		433	(1)	529.6	(1) DCPES
Pb	ug/g	28.2 ± 1.8		28	26.5 - 29		---		---		29	(1) AAC
Pb	ug/g	---		---	---		---		---		26.5	(1) ASV
Pb	ug/g	---		---	---		---		---		28	(1) AA
Pr	ug/g	---		---	---		---		8.56	(1)	---	
Rb	ug/g	87		---	83 - 91.5		87.2		---		---	
S	%	0.96		---	---		---		---		---	
Sb	ng/g	400		610	610 - 910		790 ± 160		---		---	
Sc	ug/g	10.8		10.7	10.3 - 11.56		10.8 ± 0.4		---		---	
Se	ng/g	600		580	430 - 590		---		590	(1)	580	(1) GC
Se	ng/g	---		---	---		---		---		430	(1) AA
Se(IV)	ng/g	---		---	---		---		---		1	(1) AA
Se(VI)	ng/g	---		---	---		---		---		40	(1) AA
Si	%	31.0		---	---		---		---		30	(2) DCPES
Sm	ug/g	---		6.21	30.0 - 30.0		6.52		6.21	(1)	6.5	(2) TCGS
Sr	ug/g	---		---	6.2 - 6.8		220		---		---	
Ta	ug/g	---		---	---		1.00		---		---	
Tb	ug/g	---		---	0.94 - 1.07		0.95		---		---	
Te	ng/g	500		---	0.92 - 0.98		---		---		---	
Th	ug/g	10		10.3	9.2 - 10.7		10.0 ± 0.6		---		---	
Ti	ug/g	5100		3750	3600 - 5223		5010		3750	(1)	3600	(2) DCPES
Tl	ug/g	0.5		---	---		---		---		16	(1) DCPES
U	ug/g	---		3.00	2.9 - 3.07		2.99 ± 0.06		---		---	
V	ug/g	94 ± 1		85	82.3 - 89		82.6		85	(1)	89	(2) DCPES
Y	ug/g	---		---	17 - 19.9		---		19.9	(1)	17	(1) DCPES
Yb	ug/g	---		2.2	2.12 - 3.4		2.98		2.12	(1)	2.2	(1) DCPES
Zn	ug/g	138 ± 6		120	107 - 139		---		107	(1)	125	(2) DCPES
Zn	ug/g	---		---	---		---		---		139	(1) AA
Zr	ug/g	---		---	270 - 400		400		---		270	(1) DCPES

TABLE 1646-2: INDIVIDUAL DATA FOR NBS SRM 1646 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ag (ng/g)</u>					<u>Cl (%)</u>				
88	8		FAA	83BLO 01	1.383	0.054		ITNA	85SUN 01
<u>Al (%)</u>					<u>Co (ug/g)</u>				
5.12	0.17		ICPES	84HIR 01	7.8	0.3		ICPES	84HIR 01
5.2	0.12		DCPES	81CAN 01	8	2		ITNA	85HOL 01
5.4	0.2		DCPES	82SIN 01	8	2		ITNA	85HOL 01
5.93	0.3		ITNA	85SUN 01	10.6	0.6		ITNA	85SUN 01
6.03	0.2		ITNA	85HOL 01	11	1		ITNA	84GLA 11
<u>As (ug/g)</u>					17	3		DCPES	81CAN 01
10.5	0.9		ITNA	85HOL 01	19	3		DCPES	82SIN 01
11.1	0.6		DCPES	84URA 01	<u>Cr (ug/g)</u>				
11.7	2.5		ITNA	85HOL 01	72	0.3		ICPES	84HIR 01
<u>B (ug/g)</u>					72	1		DCPES	82SIN 01
81	3		TCGS	85GAU 04	74	1		DCPES	81CAN 01
84	8		TCGS	84GLA 01	75	1		ITNA	85HOL 01
<u>Ba (ug/g)</u>					78.4	3		ITNA	85SUN 01
370			ITNA	84GLA 11	80			ITNA	84GLA 11
448	50		ITNA	85SUN 01	84	5		ITNA	86GAU 01
<u>Be (ug/g)</u>					<u>Cs (ug/g)</u>				
1.5	0.14		ICPES	86GAU 01	3.6	0.2		ITNA	84GLA 11
<u>Br (ug/g)</u>					3.6	0.4		ITNA	84GLA 02
112	1		ITNA	85SUN 01	3.7			ITNA	86GAU 01
122	2		ITNA	85HOL 01	3.7	0.6		ITNA	85HOL 01
<u>Ca (ug/g)</u>					3.85	0.15		ITNA	85SUN 01
8120			AA	85GAU 04	<u>Cu (ug/g)</u>				
8760	620		ITNA	85SUN 01	13.3	0.6		AAC	85GAU 04
<u>Cd (ng/g)</u>					16.8			ASV	83MAD 01
260			AAC	85GAU 04	17.8	0.4		IDMS	84BRO 03
355	40		FAA	86GAU 01	19	0.6		ICPES	84HIR 01
360	10		IDMS	84BRO 03	31	2.8		DCPES	81CAN 01
<u>Ce (ug/g)</u>					<u>Dy (ug/g)</u>				
76	0.9		ICPES	85JAR 02	2.8	0.21		DCPES	81CAN 01
77.2	1.6		ITNA	85SUN 01	4.04	0.07		ICPES	85JAR 02
82			ITNA	84GLA 11	5.98	0.23		ITNA	85SUN 01
84	8		ITNA	85HOL 01	<u>Er (ug/g)</u>				
110	4.1		DCPES	81CAN 01	2.41	0.04		ICPES	85JAR 02
					<u>Eu (ug/g)</u>				
					1.34			ITNA	84GLA 11
					1.36			ICPES	85JAR 02
					1.62	0.17		ITNA	85SUN 01

TABLE 1646-2: INDIVIDUAL DATA FOR NBS SRM 1646 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Fe (%)</u>					<u>Mg (%)</u>				
2.9	0.05		DCPES	81CAN 01	0.9	0.08		IENA	85HOL 01
3	0.15		DCPES	82SIN 01	0.969	0.015		ICPES	84HIR 01
3.02	0.04		ICPES	84HIR 01	0.97			AA	85GAU 04
3.38			ITNA	84GLA 11	0.97	0.09		ITNA	85SUN 01
3.49	0.1		ITNA	85SUN 01					
3.52	0.11		ITNA	85HOL 01					
<u>Ga (ug/g)</u>					<u>Mn (ug/g)</u>				
19	1.6		DCPES	81CAN 01	270	15		DCPES	82SIN 01
					280	5		DCPES	81CAN 01
					328	3		ICPES	84HIR 01
					356	17		IENA	85HOL 01
					362	8		ITNA	85HOL 01
					385	20		ITNA	85SUN 01
<u>Gd (ug/g)</u>					<u>Mo (ug/g)</u>				
3.7	0.4	4	TCGS	85GLA 05	9	0.3		ICPES	84HIR 01
4.6	0.8	4	TCGS	85GLA 05	19	2.5		DCPES	81CAN 01
5.09	0.13		ICPES	85JAR 02					
<u>Hf (ug/g)</u>					<u>Na (%)</u>				
11.1	0.7		ITNA	85SUN 01	1.82	0.01		IENA	85HOL 01
11.2			ITNA	84GLA 11	2.1	0.2		ITNA	85HOL 01
<u>Ho (ug/g)</u>					2.19	0.02		ITNA	85SUN 01
0.84	0.03		ICPES	85JAR 02					
<u>I (ug/g)</u>					<u>Nb (ug/g)</u>				
32.5	2.9		ITNA	85SUN 01	53	4		DCPES	81CAN 01
36	2		IENA	85HOL 01					
<u>K (%)</u>					<u>Nd (ug/g)</u>				
1.43	0.17		IENA	85HOL 01	32.6	9.7		ITNA	85SUN 01
2.23	0.25		ITNA	85SUN 01	34.7	0.6		ICPES	85JAR 02
					40			ITNA	84GLA 11
<u>La (ug/g)</u>					<u>Ni (ug/g)</u>				
35.7	0.5		ICPES	85JAR 02	31	1.5		DCPES	81CAN 01
36	0.63		DCPES	81CAN 01	31	5		DCPES	82SIN 01
38.9	1.3		ITNA	85SUN 01	32	0.3		ICPES	84HIR 01
					32.8	1.7		AAC	85GAU 04
<u>Li (ug/g)</u>					<u>P (ug/g)</u>				
46			AA	85GAU 04	433	1		ICPES	84HIR 01
					529.6	3.9		DCPES	84URA 01
<u>Lu (ng/g)</u>					<u>Pb (ug/g)</u>				
320			ICPES	85JAR 02	26.5			ASV	83HAD 01
370			ITNA	84GLA 11	28	4		FAA	86GAU 01
444	18		ITNA	85SUN 01	29	1		AAC	85GAU 04

TABLE 1646-2: INDIVIDUAL DATA FOR NBS SRM 1646 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Pr (ug/g)</u>					<u>Ta (ug/g)</u>				
8.56	0.19		ICPES	85JAR 02	0.94			ITNA	84GLA 11
					1.07	0.16		ITNA	85SUN 01
<u>Rb (ug/g)</u>					<u>Tb (ug/g)</u>				
83			ITNA	84GLA 11	0.92			ITNA	84GLA 11
91.5	4.6		ITNA	85SUN 01	0.98	0.16		ITNA	85SUN 01
<u>Sb (ng/g)</u>					<u>Th (ug/g)</u>				
330	80		IENA	85HOL 01	9.2	0.4		IENA	85HOL 01
610			ITNA	84GLA 11	9.6			ITNA	84GLA 11
850			ITNA	84GLA 02	10.3	0.4		ITNA	85SUN 01
910	250		ITNA	85SUN 01	10.4	1		ITNA	86GAU 01
<u>Sc (ug/g)</u>					10.7			ITNA	85GAU 04
10.3	0.4		ITNA	84GLA 11	12	0.7		ITNA	85HOL 01
10.4	0.2		ITNA	84GLA 02	<u>Ti (ug/g)</u>				
10.7	0.6		IENA	85HOL 01	3600	100		DCPES	81CAN 01
10.9	0.4		ITNA	85HOL 01	3600	360		DCPES	82SIN 01
11	0.2		ITNA	85SUN 01	3750	150		ICPES	84HIR 01
11.56	0.06		ITNA	86GAU 01	4800	200		ITNA	85HOL 01
<u>Se (ng/g)</u>					5223	278		ITNA	85SUN 01
430	20		HAA	85CUT 01	<u>Tl (ug/g)</u>				
580	50		GC	83SIU 01	16	2.7		DCPES	81CAN 01
590	60		ICPES	83SIU 01	<u>U (ug/g)</u>				
<u>Se(IV) (ng/g)</u>					2.9			DNA	84GLA 11
1	0.6		HAA	85CUT 01	2.96	0.09		DNA	85GAU 04
<u>Se(VI) (ng/g)</u>					3			DNA	84GLA 02
40	20		HAA	85CUT 01	3.01	0.1		DNA	86GAU 01
<u>Si (%)</u>					3.07	0.48		ITNA	85SUN 01
30	0.52		DCPES	81CAN 01	<u>V (ug/g)</u>				
30	1.2		DCPES	82SIN 01	82.3	3		ITNA	85SUN 01
<u>Sm (ug/g)</u>					83	5		ITNA	85HOL 01
6.2	0.6	4	TCGS	85GLA 05	85	4.2		ICPES	84HIR 01
6.21	0.13		ICPES	85JAR 02	89	2.3		DCPES	81CAN 01
6.52	0.19		ITNA	85SUN 01	89	9		DCPES	82SIN 01
6.8	0.6	4	TCGS	85GLA 05	<u>Y (ug/g)</u>				
<u>Sr (ug/g)</u>					17	1.4		DCPES	81CAN 01
220	73		ITNA	85SUN 01	19.9	0.4		ICPES	85JAR 02

TABLE 1646-2: INDIVIDUAL DATA FOR NBS SRM 1646 (cont.)

<u>Conc</u>	<u>Uncer</u>	<u>Com</u>	<u>Method</u>	<u>Reference</u>	
<u>Yb (ug/g)</u>					
2.12	0.02		ICPES	85JAR 02	
2.2	0.08		DCPES	81CAN 01	
2.56	0.13		ITNA	85SUN 01	
3.4			ITNA	84GLA 11	
<u>Zn (ug/g)</u>					
107	3		ICPES	84HIR 01	
120	8		DCPES	82SIN 01	
130	1		DCPES	81CAN 01	
139			AA	85GAU 04	
<u>Zr (ug/g)</u>					
270	12		DCPES	81CAN 01	
400			ITNA	84GLA 11	

TABLE 1647-1: COMPILED DATA FOR NBS SRM 1647 PRIORITY POLLUTANT POLYNUCLEAR AROMATIC HYDROCARBONS (IN ACETONITRILE)

COMPOUND	CAS #	UNITS	NBS	CONSENSUS	MEDIAN	RANGE	METHOD
			Mean \pm SD	Mean \pm SD (n)			
Acenaphthene	83329	mg/L	21.0 \pm 0.4	---	---	---	---
Acenaphthylene	208968	mg/L	19.1 \pm 0.2	---	---	---	---
Anthracene	120127	mg/L	3.29 \pm 0.10	---	---	---	---
Benz[a]anthracene	56553	mg/L	5.03 \pm 0.10	---	---	---	---
Benzo[b]fluoranthene	205992	mg/L	5.11 \pm 0.10	---	---	---	---
	205992	ug/g	---	2.44 \pm 0.13 (5)	2.34	2.34 - 2.65	HPLC
Benzo[k]fluoranthene	207089	mg/L	5.02 \pm 0.10	---	---	---	---
	207089	ug/g	---	2.4 \pm 0.7 (6)	2.42	1.22 - 3.17	HPLC
Benzo[ghi]perylene	191242	mg/L	4.01 \pm 0.10	---	---	---	---
Benzo[a]pyrene	50328	mg/L	5.3 \pm 0.1	---	---	---	---
Chrysene	218019	mg/L	4.68 \pm 0.10	---	---	---	---
Dibenz[a,h]anthracene	53703	mg/L	3.68 \pm 0.10	---	---	---	---
Fluoranthene	206440	mg/L	10.1 \pm 0.2	---	---	---	---
Fluorene	86737	mg/L	4.92 \pm 0.10	---	---	---	---
Indeno[1,2,3-cd]pyrene	193395	mg/L	4.06 \pm 0.10	---	---	---	---
Naphthalene	91203	mg/L	22.5 \pm 0.2	---	---	---	---
Perylene	198550	ug/g	---	< 0.1	---	---	HPLC
Phenanthrene	85018	mg/L	5.06 \pm 0.10	---	---	---	---
Pyrene	129000	mg/L	9.84 \pm 0.10	---	---	---	---

TABLE 1647-2: INDIVIDUAL DATA FOR NBS SRM 1647

Conc	Uncer	Com	Method	Reference
<u>Benzo[b]fluoranthene (ug/g)</u>				
1.04		12	HPLC	850TT 01
2.34		12	HPLC	850TT 01
2.34		12	HPLC	850TT 01
2.39		12	HPLC	850TT 01
2.47		12	HPLC	850TT 01
2.65		12	HPLC	850TT 01
<u>Benzo[k]fluoranthene (ug/g)</u>				
1.22		12	HPLC	850TT 01
2.04		12	HPLC	850TT 01
2.42		12	HPLC	850TT 01
2.42		12	HPLC	850TT 01
2.86		12	HPLC	850TT 01
3.17		12	HPLC	850TT 01
<u>Perylene (ug/g)</u>				
<	0.1		HPLC	850TT 01

TABLE 1648-1: COMPILED DATA FOR NBS SRM 1648 URBAN PARTICULATE MATTER (revised 3/1/86)

ELE	UNITS	NBS		CONSENSUS		MEDIAN	RANGE		AA		NAA		ICPES		OTHER METHODS	
		Mean \pm SD	(n)	Mean \pm SD	(n)		Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)
Ag	ug/g	6		6.1 \pm 0.2	(5)	6.18	5.8 - 6.4		6.18	(1)	6.1 \pm 0.3	(3)	---		6.0	(1) XRF
Al	%	3.42 \pm 0.11		3.22 \pm 0.16	(8)	3.12	3.05 - 3.5		3.18	(2)	3.26 \pm 0.19	(4)	3.18	(2)	---	
As	ug/g	115 \pm 10		116 \pm 3	(11)	117	112 - 119		114 \pm 3	(3)	118 \pm 1	(4)	116 \pm 3	(4)	---	
B	ug/g	---		3000 ?	(2)	---	158 - 6000		---		---		---		158	(1) TCGS
Ba	ug/g	737		780 \pm 40	(5)	774	740 - 840		---		793 \pm 50	(3)	774	(1)	757	(1) XRF
Be	ug/g	---		2.6 \pm 0.4	(3)	2.5	2.3 - 3.0		---		---		---		---	
Br	ug/g	500		506 \pm 25	(6)	504	460 - 526		---		503 \pm 27	(5)	---		---	
C	%	---		14.98	(2)	---	14.7 - 15.27		---		---		---		---	
Ca	%	---		5.83 \pm 0.33	(8)	5.77	5.4 - 6.30		5.8 \pm 0.4	(3)	5.8 \pm 0.4	(3)	---		14.7	(1) CB
Cd	ug/g	75 \pm 7		72 \pm 2	(13)	72	69 - 75		72 \pm 2	(7)	70	(1)	73 \pm 2	(4)	6.1	(1) XRF
Ce	ug/g	55		55 \pm 4	(4)	53	52 - 61		---		53 \pm 1	(3)	61	(1)	---	
Cl	ug/g	4500		4760 \pm 230	(3)	4890	4500 - 4900		---		4760 \pm 230	(3)	---		---	
Co	ug/g	18		17.4 \pm 1.8	(7)	17.6	15 - 20		15.2	(1)	17.6 \pm 0.4	(3)	18 \pm 3	(3)	---	
Cr	ug/g	403 \pm 12		397 \pm 14	(9)	398	380 - 417		393 \pm 20	(3)	407 \pm 5	(3)	391 \pm 10	(3)	440	(1) XRF
Cs	ug/g	3		3.5 \pm 0.2	(3)	3.4	3.3 - 3.73		---		3.5 \pm 0.2	(3)	---		---	
Cu	ug/g	609 \pm 27		600 \pm 23	(17)	596	570 - 669		591 \pm 5	(9)	669	(1)	630 \pm 50	(4)	640 \pm 60	(3) XRF
Eu	ug/g	0.8		0.85 \pm 0.13	(3)	0.79	0.77 - 1.0		---		0.78	(2)	1.0	(1)	---	
Fe	%	3.91 \pm 0.10		3.92 \pm 0.24	(15)	3.9	3.43 - 4.50		3.7 \pm 0.5	(8)	3.85 \pm 0.04	(4)	3.9	(2)	4.00 \pm 0.04	(3) XRF
Ga	ug/g	---		40 ?	(2)	---	8.3 - 72		---		8.3	(1)	72	(1)	---	
Gd	ug/g	---		3.4	(2)	---	3.1 - 3.7		---		---		---		3.4	(2) TCGS
H	%	---		2.23	(1)	---	---		---		---		---		2.23	(1) CB
Hf	ug/g	4.4		4.6 \pm 0.5	(3)	4.47	4.2 - 5.2		---		4.6 \pm 0.5	(3)	---		---	
I	ug/g	20		18 \pm 2	(3)	19.2	16 - 20		---		20	(1)	---		16	(1) XRF
I	ug/g	---		---		---	---		---		---		---		19.2	(1) ISE
I-129	atom/g	---		1.65	(2)	---	1.5 - 1.8		---		1.8	(1)	---		---	
In	ng/g	1000		980	(1)	---	---		---		980	(1)	---		---	
K	%	1.05 \pm 0.01		1.03 \pm 0.05	(6)	1.01	0.96 - 1.11		---		1.03 \pm 0.06	(5)	---		1.04	(1) XRF
La	ug/g	42		39 \pm 3	(5)	40	35 - 42		---		40 \pm 2	(4)	35	(1)	---	
Lu	ng/g	---		34	(1)	---	---		---		34	(1)	---		---	
Mg	ug/g	8000		7930 \pm 650	(6)	7600	7200 - 9000		7580 \pm 330	(4)	8300	(1)	9000	(1)	---	
Mn	ug/g	860		822 \pm 45	(19)	830	740 - 880		816 \pm 41	(8)	793 \pm 55	(5)	840	(2)	865	(2) XRF
Mo	ug/g	---		18.2 \pm 1.9	(4)	17	17 - 21		---		21	(1)	18	(2)	17	(1) XRF

TABLE 1648-1: COMPILED DATA FOR NBS SRM 1648 URBAN PARTICULATE MATTER (cont.)

ELE	UNITS	NBS		CONSENSUS		MEDIAN	RANGE	AA		NAA		ICPES		OTHER METHODS	
		Mean \pm SD	(n)	Mean \pm SD	(n)			Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n)	Mean \pm SD	(n) Method
N	%	3.08	(1)	3.25	(1)	---	---	---	---	---	---	---	---	3.25	(1) CB
NH ₄ -N	%	2.01		---		---	---	---	---	---	---	---	---	---	
NO ₃ -N	%	1.07		---		---	---	---	---	---	---	---	---	---	
Na	ug/g	4250 \pm 20	(4)	4230 \pm 260	(4)	4100	4000 - 4600	---	---	4230 \pm 260	(4)	---	---	---	
Nb	ug/g	---	(1)	22	(1)	---	---	---	---	---	---	---	---	22	(1) XRF
Ni	ug/g	82 \pm 3	(15)	82 \pm 12	(15)	79.5	62 - 105	81 \pm 12	(6)	75	(1)	74 \pm 10	(4)	91	(2) XRF
Ni	ug/g	---		---		---	---	---	---	---	---	---	---	84	(1) VOLT
Pb	ug/g	6550 \pm 80	(17)	6520 \pm 250	(17)	6530	6100 - 7000	6420 \pm 180	(9)	---	---	6710 \pm 220	(4)	6660 \pm 320	(3) XRF
Pr	ug/g	---	(1)	8.0	(1)	---	---	---	---	---	---	8.0	(1)	---	
Rb	ug/g	52	(4)	54.5 \pm 2.6	(4)	53	52 - 58	---	---	54 \pm 3	(4)	---	---	---	
S	%	5.0	(1)	5.21	(1)	---	---	---	---	---	---	---	---	---	
SO ₄	%	15.42		---		---	---	---	---	---	---	---	---	---	
Sb	ug/g	45	(5)	44 \pm 2	(5)	44	41 - 47	---	---	45 \pm 2	(3)	41	(1)	44	(1) XRF
Sc	ug/g	7	(4)	6.70 \pm 0.12	(4)	6.6	6.6 - 6.8	---	---	6.7 \pm 0.1	(4)	---	---	---	
Se	ug/g	27 \pm 1	(6)	24 \pm 2	(6)	24.22	20 - 27	---	---	25 \pm 2	(3)	23	(2)	25	(1) XRF
Si	%	12.5	(6)	13.0 \pm 1.0	(6)	13.0	11.5 - 14.7	12.6 \pm 0.8	(4)	13	(1)	---	---	14.7	(1) XRF
Sm	ug/g	4.4	(5)	4.4 \pm 0.3	(5)	4.4	4.0 - 4.8	---	---	4.2 \pm 0.2	(3)	---	---	4.6	(2) TCGS
Sn	ug/g	---	(1)	147	(1)	---	---	---	---	---	---	---	---	147	(1) XRF
Sr	ug/g	---	(3)	207 \pm 15	(3)	211	190 - 220	---	---	220	(1)	---	---	200	(2) XRF
Ta	ug/g	---	(2)	6.98	(2)	---	6.76 - 7.2	---	---	6.98	(2)	---	---	---	
Th	ug/g	7.4	(3)	7.6 \pm 0.2	(3)	7.5	7.4 - 7.8	---	---	7.6 \pm 0.2	(3)	---	---	---	
Ti	ug/g	4000	(9)	4070 \pm 200	(9)	4000	3800 - 4500	4030 \pm 120	(3)	4000 \pm 500	(4)	4000	(1)	4030	(2) XRF
U	ug/g	5.5 \pm 0.1	(4)	5.5 \pm 0.3	(4)	5.42	5.2 - 5.9	---	---	5.5 \pm 0.3	(4)	---	---	---	
V	ug/g	140 \pm 3	(8)	121 \pm 8	(8)	119	106 - 130	---	---	122 \pm 6	(5)	118 \pm 12	(3)	---	
W	ug/g	4.8	(3)	4.2 \pm 0.7	(3)	4.4	3.5 - 4.8	---	---	4.2 \pm 0.7	(3)	---	---	---	
Y	ug/g	---	(1)	5.0	(1)	---	---	---	---	---	---	5.0	(1)	---	
Yb	ug/g	---	(1)	2.0	(1)	---	---	---	---	---	---	2.0	(1)	---	
Zn	ug/g	4760 \pm 140	(21)	4740 \pm 70	(21)	4740	4580 - 4890	4720 \pm 70	(10)	4760 \pm 60	(4)	4720 \pm 40	(4)	4780 \pm 120	(3) XRF
Zr	ug/g	---	(1)	169	(1)	---	---	---	---	---	---	---	---	169	(1) XRF

TABLE 1648-1: COMPILED DATA FOR NBS SRM 1648 URBAN PARTICULATE MATTER (cont.)

COMPOUND	CAS #	UNITS	NBS	CONSENSUS Mean \pm SD	MEDIAN	RANGE	METHOD MEANS	
							Mean (n)	Method
Anthracene	120127	ng/g	---	335	---	310 - 360	310 (1)	GC-MS
1,2-Benzanthracene	56553	ug/g	---	2.9 \pm 0.3	2.8	2.7 - 3.2	3.0 (2)	LC
Benzo(g,h,i)perylene	191242	ug/g	---	6.15	---	5.5 - 6.8	6.8 (1)	GC-MS
Benzo-a-pyrene	50328	ug/g	---	3.1 \pm 0.4	3.3	2.6 - 3.4	3.0 (2)	LC
Benzo-e-pyrene	192972	ug/g	---	6.8	---	---	6.8 (1)	GC-MS
Benzo-k-fluoranthene	207089	ug/g	---	3.35	---	3.3 - 3.4	3.35 (2)	LC
Chrysene	218019	ug/g	---	6.6	---	6.6 - 6.6	6.6 (2)	LC
Fluoranthene	206440	ug/g	---	8.0 \pm 0.6	7.9	7.4 - 8.7	8.3 (2)	LC
Indeno(1,2,3-cd)pyrene	193395	ug/g	---	4.7 \pm 0.1	4.7	4.6 - 4.8	4.75 (2)	LC
Perylene	198550	ng/g	---	620 \pm 90	650	520 - 690	670 (2)	LC
Phenanthrene	85018	ug/g	---	4.7	---	4.6 - 4.8	4.8 (1)	GC-MS
Pyrene	129000	ug/g	---	6.8 \pm 0.6	6.8	6.1 - 7.4	6.1 (1)	GC-MS
							360 (1)	LC
							2.7 (1)	GC-MS
							5.5 (1)	LC
							3.3 (1)	GC-MS
							7.4 (1)	GC-MS
							4.6 (1)	GC-MS
							520 (1)	GC-MS
							4.6 (1)	LC
							7.1 (2)	LC

TABLE 1648-2: COMPILED DATA FOR NBS SRM 1648 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Anthracene (ng/g)</u>					<u>Phenanthrene (ug/g)</u>				
310			GC-MS	84SIM 03	4.6	0.3		LC	84MAY 01
360	10		LC	84MAY 01	4.8			GC-MS	84SIM 03
<u>1,2-Benzanthracene (ug/g)</u>					<u>Pyrene (ug/g)</u>				
2.7			GC-MS	84SIM 03	6.1			GC-MS	84SIM 03
2.8	0.1	44	LC	84MAY 01	6.8	0.2	44	LC	84MAY 01
3.2	0.1	44	LC	84MAY 01	7.4	0.2	44	LC	84MAY 01
<u>Benzo(g,h,i)perylene (ug/g)</u>					<u>Ag (ug/g)</u>				
5.5	0.8		LC	84MAY 01	5.8	0.9		IENA	84GLA 07
6.8			GC-MS	84SIM 03	6	1	D	XRF	79GIA 03
<u>Benzo-a-pyrene (ug/g)</u>					6	1		XRF	77GIA 02
2.6	0.2	44	LC	84MAY 01	6.18			FAA	83BLO 01
3.3			GC-MS	84SIM 03	6.2			NAA	83BLO 01
3.4	0.2	44	LC	84MAY 01	6.4	0.5		ITNA	79GRE 01
<u>Benzo-e-pyrene (ug/g)</u>					<u>Al (%)</u>				
6.8			GC-MS	84SIM 03	3.05	0.03		AA	81FRA 01
<u>Benzo-k-fluoranthene (ug/g)</u>					3.05	0.17		ICPES	84JEN 02
3.3	0.1	44	LC	84MAY 01	3.1	0.1		ITNA	84GLA 07
3.4	0.05	44	LC	84MAY 01	3.12	0.2	35	ITNA	81GLA 03
<u>Chrysene (ug/g)</u>					3.3			ICPES	80FLO 01
6.6	0.1	44	LC	84MAY 01	3.3			ITNA	84TU 03
6.6	0.2	44	LC	84MAY 01	3.3	0.45		AA	81FAR 01
<u>Fluoranthene (ug/g)</u>					3.5	0.1		ITNA	79GRE 01
7.4			GC-MS	84SIM 03	<u>As (ug/g)</u>				
7.9	0.6	44	LC	84MAY 01	104	10		ICPES	84JEN 02
8.7	0.4	44	LC	84MAY 01	112			ICPES	80FLO 01
<u>Indeno(1,2,3-cd)pyrene (ug/g)</u>					112	2		AA	83BYR 01
4.6			GC-MS	84SIM 03	113	12		FAA	83LOV 01
4.7	0.2	44	LC	84MAY 01	117			ICPES	82NYG 01
4.8	0.2	44	LC	84MAY 01	117			HAA	84YAM 01
<u>Perylene (ng/g)</u>					117	5		ITNA	79GRE 01
520			GC-MS	84SIM 03	117	5		ITNA	84GLA 07
650	20	44	LC	84MAY 01	117	6	11	ICPES	84SCH 03
690	20	44	LC	84MAY 01	119		35	NAA	81GLA 03
					119	2		IENA	84GLA 07
					119	2	11	ICPES	84SCH 03
					<u>B (ug/g)</u>				
					158	15		TCGS	84GLA 01
					6000	170		UU	81FRA 01

TABLE 1648-2: COMPILED DATA FOR NBS SRM 1648 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ba (ug/g)</u>					<u>Cd (ug/g) cont.</u>				
740	60		ITNA	79GRE 01	72		11	AA	82YAM 01
757	35	D	XRF	79GIA 03	72	1	11	ICPES	84SCH 03
757	35		XRF	77GIA 02	73			ICPES	80FLO 01
774			ICPES	80FLO 01	74	2		AA	83BYR 01
800	10	5	ITNA	84GLA 07	75	7		AA	84GLA 07
840	40		IENA	84GLA 07	75	8		ICPES	84JEN 02
980	100	5	ITNA	84GLA 07	105	9		AA	81FRA 01
<u>Be (ug/g)</u>					<u>Ce (ug/g)</u>				
2.3	0.2	11	ICPES	84SCH 03	52	5		IENA	84GLA 07
2.5	0.2	11	ICPES	84SCH 03	53	2		ITNA	84GLA 07
3			ICPES	80FLO 01	54	3		ITNA	79GRE 01
<u>Br (ug/g)</u>					61			ICPES	80FLO 01
460	15	5	IENA	84GLA 07	<u>Cl (ug/g)</u>				
500	30		ITNA	79GRE 01	500	60	35	ITNA	81GLA 03
504	14	5	IENA	84GLA 07	4500	200		ITNA	79GRE 01
517	14	D	XRF	79GIA 03	4890	80		ITNA	84GLA 07
517	14		XRF	77GIA 02	4900			ITNA	84TU 03
526	24	35	ITNA	81GLA 03	<u>Co (ug/g)</u>				
526	25		ITNA	84GLA 07	15	3		ICPES	84JEN 02
<u>C (%)</u>					15.2	0.9		AA	81FRA 01
14.7	0.3		CB	84GLA 07	17.2	0.6		ITNA	84GLA 07
15.27	0.15		UU	81FRA 01	17.6	0.5		ITNA	79GRE 01
<u>Ca (%)</u>					18	1		IENA	84GLA 07
5.4	0.3		IENA	84GLA 07	19	2	11	ICPES	84SCH 03
5.5	0.4		AA	82GLA 02	20	3	11	ICPES	84SCH 03
5.6	0.4		AA	84GLA 07	28			ICPES	80FLO 01
5.77	0.38		ICPES	84JEN 02	42	7	35	ITNA	81GLA 03
5.8	0.5		ITNA	79GRE 01	<u>Cr (ug/g)</u>				
6.1	0.04		EXRF	78PEL 01	173	27		FAA	81FAR 01
6.18	0.23		AA	81FAR 01	380	21		ICPES	84JEN 02
6.3	0.3		ITNA	84GLA 07	380	40		AA	84GLA 07
<u>Cd (ug/g)</u>					383			AA	82GLA 02
64	7		AA	82GLA 02	396	6	11	ICPES	84SCH 03
69	4		FAA	81FAR 01	398			ICPES	80FLO 01
70	2		XRF	77GIA 02	402	10		ITNA	79GRE 01
70	2	D	XRF	79GIA 03	410	8		ITNA	84GLA 07
70	6		ITNA	79GRE 01	410	50	35	ITNA	81GLA 03
71	2	11	ICPES	84SCH 03	417	16		AA	81FRA 01
72		11	AA	82YAM 01	440	10		EXRF	78PEL 01
72		11	AA	82YAM 01	560	11		UU	81FRA 01
72		11	AA	82YAM 01	580	50		UU	81FRA 01

TABLE 1648-2: COMPILED DATA FOR NBS SRM 1648 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Cs (ug/g)</u>					<u>Ga (ug/g)</u>				
3.3	0.2		IENA	84GLA 07	8.3	0.4		IENA	84GLA 07
3.4	0.2		ITNA	79GRE 01	72			ICPES	80FLO 01
3.73	0.29		ITNA	84GLA 07					
<u>Cu (ug/g)</u>					<u>Gd (ug/g)</u>				
570	44		UU	81FRA 01	3.1	0.6	4	TCGS	85GLA 05
581	16		XRF	77GIA 02	3.7	0.4	4	TCGS	85GLA 05
585		11	AA	82YAM 01					
586	11		AA	83BYR 01	<u>H (%)</u>				
586	22		FAA	81FAR 01					
589	12		AA	81FRA 01	2.23	0.04		CB	84GLA 07
590		11	AA	82YAM 01					
590		11	AA	82YAM 01	<u>Hf (ug/g)</u>				
595		11	AA	82YAM 01					
596	24		AA	82GLA 02	4.2	0.3		ITNA	79GRE 01
598			ICPES	80FLO 01	4.47	0.07		ITNA	84GLA 07
600	30		AA	84GLA 07	5.2	0.4		IENA	84GLA 07
603	7	11	ICPES	84SCH 03	<u>I (ug/g)</u>				
609	29	11	ICPES	84SCH 03					
610	18		UU	81FRA 01	16	2		XRF	77GIA 02
640	60		EXRF	81KIN 01	16	2	D	XRF	79GIA 01
669			ITNA	84TU 03	19.2	0.3		ISE	85COE 01
695	35		ICPES	84JEN 02	20	5		ITNA	79GRE 01
700	100		EXRF	78PEL 01					
<u>Eu (ug/g)</u>					<u>I-129 (ATOM/G)</u>				
0.77	0.03		ITNA	84GLA 07					
0.79	0.08		ITNA	79GRE 01	1.5		38	UU	83BPN 01
1			ICPES	80FLO 01	1.8	0.6	38	RTNA	83LUT 01
<u>Fe (%)</u>					<u>In (ng/g)</u>				
3.0		11	AA	82YAM 01					
3.05		11	AA	82YAM 01	980	70		ITNA	79GRE 01
3.43	0.05		AA	81FRA 01					
3.7			AA	82GLA 02	<u>K (%)</u>				
3.7	0.25		ICPES	84JEN 02					
3.8	0.5	35	ITNA	81GLA 03	0.96	0.12		ITNA	84GLA 07
3.84	0.08		ITNA	79GRE 01	0.99	0.11		ITNA	79GRE 01
3.86	0.06		ITNA	84GLA 07	1.01			ITNA	84TU 03
3.9		11	AA	82YAM 01	1.04	0.02		EXRF	78PEL 01
3.9		11	AA	82YAM 01	1.07	0.02		IENA	84GLA 07
3.9	0.1		IENA	84GLA 07	1.11	0.08	35	ITNA	81GLA 03
3.96	0.037		EXRF	78PEL 01	<u>La (ug/g)</u>				
4.0	0.1		EXRF	81KIN 01					
4.05	0.1		XRF	77GIA 02	35			ICPES	80FLO 01
4.05	0.1	D	XRF	79GIA 03	38	3	35	ITNA	81GLA 07
4.1			ICPES	80FLO 01	40	2		ITNA	84GLA 07
4.2	0.4		AA	84GLA 07	42	2		ITNA	79GRE 01
4.5	0.23		AA	81FAR 01	42	5		IENA	84GLA 07
5.45	0.32		UU	81FRA 01					
5.65	0.14		UU	81FRA 01					

TABLE 1648-2: COMPILED DATA FOR NBS SRM 1648 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Lu (ng/g)</u>					<u>Nb (ug/g)</u>				
34	3		ITNA	84GLA 07	22	3		XRF	77GIA 02
<u>Mg (ug/g)</u>					<u>Ni (ug/g)</u>				
5500			ITNA	84TU 03	62	6	11	ICPES	84SCH 03
7200	600		AA	82GLA 02	72	15		AA	82GLA 02
7500	400		AA	84GLA 07	74	5		ICPES	84JEN 02
7600	400		AA	81FAR 01	74.2		11	AA	82YAM 01
8000	130		AA	81FRA 01	75		11	AA	82YAM 01
8300	800		ITNA	79GRE 01	75	4		IENA	84GLA 07
9000			ICPES	80FLO 01	77	1	11	ICPES	84SCH 03
<u>Mn (ug/g)</u>					79.5		11	AA	82YAM 01
740	30		IENA	84GLA 07	80.5		11	AA	82YAM 01
747	10		ITNA	84GLA 07	83	4		EXRF	78PEL 01
770		11	AA	82YAM 01	84			VOLT	84BRA 01
770		11	AA	82YAM 01	85			ICPES	80FLO 01
790	20		ITNA	79GRE 01	99	13		XRF	77GIA 02
790	80		AA	84GLA 07	100	7		UU	81FRA 01
805	4		AA	81FRA 01	105	21		AA	81FRA 01
810	40	35	ITNA	81GLA 03	<u>Pb (ug/g)</u>				
810	60		AA	81FAR 01	6100	200		AA	82GLA 02
830	40		ICPES	84JEN 02	6200	810		UU	81FRA 01
840	85		UU	81FRA 01	6210	85		FAA	81FAR 01
850		11	AA	82YAM 01	6300	100		XRF	77GIA 02
851			ICPES	80FLO 01	6300	300		AA	84GLA 07
852		11	AA	82YAM 01	6400	45		AA	81FRA 01
860	20		EXRF	81KIN 01	6510		11	AA	82YAM 01
870	30		EXRF	78PEL 01	6530		11	AA	82YAM 01
877			ITNA	84TU 03	6530	120	11	ICPES	84SCH 03
880	19		UU	81FRA 01	6550		11	AA	82YAM 01
880	80		AA	82GLA 02	6550	190	11	ICPES	84SCH 03
961	34		XRF	77GIA 02	6560	100		AA	83BYR 01
961	34	D	XRF	79GIA 03	6630		11	AA	82YAM 01
<u>Mo (ug/g)</u>					6760	70		ICPES	84JEN 02
17	2		XRF	77GIA 02	6780	60		EXRF	78PEL 01
17	2	11	ICPES	84SCH 03	6900	200		EXRF	81KIN 01
18	1	11	ICPES	84SCH 03	7000			ICPES	80FLO 01
21	2		IENA	84GLA 07	<u>Pr (ug/g)</u>				
<u>N (%)</u>					8			ICPES	80FLO 01
3.25	0.04		CB	84GLA 07	<u>Rb (ug/g)</u>				
<u>Na (ug/g)</u>					52	9		ITNA	79GRE 01
4000	200		ITNA	79GRE 01	53	5		ITNA	84GLA 07
4100			ITNA	84TU 03	55	6	35	ITNA	81GLA 03
4220	120	5	ITNA	84GLA 07	58	2		IENA	84GLA 07
4600	200	5	ITNA	84GLA 07					
5500	1500	35	ITNA	81GLA 03					

TABLE 1648-2: COMPILED DATA FOR NBS SRM 1648 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>S (%)</u>					<u>Sr (ug/g)</u>				
5.21	0.06		UU	81FRA 01	190	10		EXRF	78PEL 01
					211	6		XRF	77GIA 02
<u>Sb (ug/g)</u>					220	10		IENA	84GLA 07
41			ICPES	82NYG 01	450			ICPES	80FLO 01
44	3		XRF	77GIA 02	<u>Ta (ug/g)</u>				
44	3	D	XRF	79GIA 03	6.76	0.17		ITNA	84GLA 07
44	6		ITNA	84GLA 02	7.2	0.4		IENA	84GLA 07
45	3		ITNA	79GRE 01	<u>Th (ug/g)</u>				
47	2		ITNA	84GLA 07	7.4	0.3		ITNA	79GRE 01
<u>Sc (ug/g)</u>					7.5	0.5		ITNA	84GLA 07
6.6	0.2		ITNA	79GRE 01	7.8	0.4		IENA	84GLA 07
6.6	0.6		ITNA	84GLA 02	<u>Ti (ug/g)</u>				
6.8		35	ITNA	81GLA 03	3300			ITNA	84TU 03
6.8	0.3		ITNA	84GLA 07	3800	200		EXRF	81KIN 01
<u>Se (ug/g)</u>					3900	800		AA	81FRA 01
4			ICPES	80FLO 01	4000			ICPES	80FLO 01
20	6		ICPES	84JEN 02	4000	200		ITNA	79GRE 01
23.1	0.2	35	RTNA	81GLA 01	4000	200		ITNA	84GLA 07
24.22	0.25		RTNA	84DEL 01	4100	300		AA	84GLA 07
25	4		XRF	77GIA 02	4100	400		AA	82GLA 02
25	4	D	XRF	79GIA 03	4260	30		EXRF	78PEL 01
26			ICPES	82NYG 01	4500	400		IENA	84GLA 07
27	2		ITNA	79GRE 01	9700		35	NAA	81GLA 03
<u>Si (%)</u>					<u>U (ug/g)</u>				
11.5	2		AA	82GLA 02	5.2	0.6		DNA	85GAU 04
12.63	0.47		AA	81FRA 01	5.42	0.2		DNA	84GLA 07
13	1.1		IENA	84GLA 07	5.6	0.05		IENA	84GLA 07
13	2		AA	84GLA 07	5.9			DNA	84GLA 02
13.3	1.1		AA	83FAR 01	<u>V (ug/g)</u>				
14.7	0.3		EXRF	78PEL 01	106			ICPES	80FLO 01
<u>Sm (ug/g)</u>					116	4		ITNA	84GLA 07
4	0.4		ITNA	79GRE 01	116	19	35	ITNA	81GLA 03
4.2	0.4	35	ITNA	81GLA 03	119	9	11	ICPES	84SCH 03
4.4	0.3		ITNA	84GLA 07	123	12		IENA	84GLA 07
4.4	0.4	4	TCGS	85GLA 05	127			ITNA	84TU 03
4.8	0.4	4	TCGS	85GLA 05	130	2	11	ICPES	84SCH 03
<u>Sn (ug/g)</u>					130	7		ITNA	79GRE 01
147	4		XRF	77GIA 02					

TABLE 1648-2: COMPILED DATA FOR NBS SRM 1648 (cont.)

Conc	Uncer	Com	Method	Reference	
<u>W (ug/g)</u>					
3.5		35	RENA	81GLA 03	
4.4	2.8		IENA	84GLA 07	
4.8	0.6		ITNA	79GRE 01	
<u>Y (ug/g)</u>					
5			ICPES	80FLO 01	
<u>Yb (ug/g)</u>					
2			ICPES	80FLO 01	
<u>Zn (ug/g)</u>					
4300	550		UU	81FRA 01	
4400	60		UU	81FRA 01	
4580	160		AA	81FAR 01	
4650		11	AA	82YAM 01	
4650	150		EXRF	78PEL 01	
4670	35		ICPES	84JEN 02	
4670	70		AA	83BYR 01	
4700		11	AA	82YAM 01	
4700		11	AA	82YAM 01	
4700			ICPES	80FLO 01	
4700	200		ITNA	79GRE 01	
4740	30		AA	80EPS 01	
4740	130		IENA	84GLA 07	
4750		11	AA	82YAM 01	
4750	50		ITNA	84GLA 07	
4760	70	11	ICPES	84SCH 03	
4760	110	11	ICPES	84SCH 03	
4800			AA	82GLA 02	
4800	60		AA	81FRA 01	
4800	100		EXRF	81KIN 01	
4800	300		AA	84GLA 07	
4850	240	35	ITNA	81GLA 03	
4890	130	D	XRF	79GIA 03	
4890	130		XRF	77GIA 02	
<u>Zr (ug/g)</u>					
169	8		XRF	77GIA 02	

TABLE 1649-1: COMPILED DATA FOR NBS SRM 1649 URBAN DUST/ ORGANICS (revised 3/1/86)

COMPOUND	CAS #	UNITS	NBS		CONSENSUS		MEDIAN	RANGE	METHOD MEANS		
			Mean \pm	SD	Mean \pm	SD (n)			Mean \pm	SD	(n) Method
Anthracene	120127	ng/g	---	---	500	(1)	---	---	500	(1)	GC-MS
Benz[a]anthracene	56553	ug/g	2.6 \pm 0.3	---	2.7 \pm 0.3	(6)	2.7	2.4 - 3.3	2.63 \pm 0.21	(3)	LC
	56553	ug/g	---	---	---	---	---	---	3.05	(2)	GC-MS
	56553	ug/g	---	---	---	---	---	---	2.4	(1)	GC
Benzo[b]fluoranthene	205992	ug/g	6.2	---	6.1	(2)	---	6.0 - 6.2	6.1	(2)	LC
Benzo[k]fluoranthene	207089	ug/g	2	---	2.03 \pm 0.06	(3)	2.0	2.0 - 2.1	2.03 \pm 0.06	(3)	LC
Benzo[ghi]perylene	191242	ug/g	4.5 \pm 1.1	---	4.6 \pm 0.5	(6)	4.4	3.9 - 5.2	4.7	(1)	GC
	191242	ug/g	---	---	---	---	---	---	4.7	(2)	GC-MS
	191242	ug/g	---	---	---	---	---	---	4.4 \pm 0.7	(3)	LC
Benzo[a]pyrene	50328	ug/g	2.9 \pm 0.5	---	2.6 \pm 0.3	(6)	2.6	2.2 - 3.0	2.53 \pm 0.12	(3)	LC
	50328	ug/g	---	---	---	---	---	---	2.5	(2)	GC-MS
	50328	ug/g	---	---	---	---	---	---	3.0	(1)	GC
Benzo[e]pyrene	192972	ug/g	3.3	---	3.5 \pm 0.4	(4)	3.3	3.1 - 3.9	3.35	(2)	GC-MS
	192972	ug/g	---	---	---	---	---	---	3.3	(1)	GC
	192972	ug/g	---	---	---	---	---	---	3.9	(1)	LC
Chrysene	218019	ug/g	3.6	---	3.63 \pm 0.15	(4)	3.7	3.5 - 4.6	3.8	(1)	GC-MS
	218019	ug/g	---	---	---	---	---	---	3.57 \pm 0.12	(3)	LC
	218019	ug/g	---	---	---	---	---	---	4.6	(1)	GC
Dibenz[a,h]anthracene	53703	ng/g	410	---	430	(2)	---	410 - 450	430	(2)	LC
Fluoranthene	206440	ug/g	7.1 \pm 0.5	---	7.08 \pm 0.19	(6)	7.0	6.8 - 7.3	7.3	(1)	GC
	206440	ug/g	---	---	---	---	---	---	7.15	(2)	GC-MS
	206440	ug/g	---	---	---	---	---	---	6.97 \pm 0.15	(3)	LC
Indeno[1,2,3-cd]pyrene	193395	ug/g	3.3 \pm 0.5	---	3.52 \pm 0.25	(6)	3.4	3.3 - 4.0	3.47 \pm 0.12	(3)	LC
	193395	ug/g	---	---	---	---	---	---	3.7	(2)	GC-MS
	193395	ug/g	---	---	---	---	---	---	3.3	(1)	GC
Perylene	198550	ng/g	760	---	750 \pm 120	(6)	740	570 - 900	730 \pm 75	(3)	LC
	198550	ng/g	---	---	---	---	---	---	735	(2)	GC-MS
	198550	ng/g	---	---	---	---	---	---	840	(1)	GC
Phenanthrene	85018	ug/g	4.5 \pm 0.3	---	4.72 \pm 0.18	(4)	4.7	4.5 - 4.9	4.6	(2)	LC
	85018	ug/g	---	---	---	---	---	---	4.85	(2)	GC-MS
Pyrene	129000	ug/g	6.6	---	6.2 \pm 0.5	(6)	6.0	5.8 - 7.2	7.2	(1)	GC
	129000	ug/g	---	---	---	---	---	---	5.9	(2)	GC-MS
	129000	ug/g	---	---	---	---	---	---	6.17 \pm 0.15	(3)	LC
Triphenylene	217594	ug/g	1.7	---	1.7	(1)	---	---	1.7	(1)	LC

TABLE 1649-1: COMPILED DATA FOR NBS SRM 1649 URBAN DUST/ ORGANICS (cont.)
(revised 3/1/86)

ELEMENT	UNITS	NBS	ELEMENT	UNITS	NBS
Ag	ug/g	3.5	La	ug/g	33.3
As	ug/g	67	Mo	ug/g	14
Ba	ug/g	570	Rb	ug/g	47
Br	ug/g	1190	S	%	3.27
Cd	ug/g	18	Sb	ug/g	29.9
Ce	ug/g	51.6	Sc	ug/g	8.73
Cl	ug/g	2820	Se	ug/g	25.6
Co	ug/g	16.4	Sm	ug/g	4.71
Cr	ug/g	211	Sn	ug/g	56
Cs	ug/g	2.85	Th	ug/g	6.63
Eu	ug/g	0.87	U	ug/g	2.65
Fe	%	3.00	W	ug/g	3.8
Hf	ug/g	4.41	Zn	ug/g	1670

TABLE 1649-2: INDIVIDUAL DATA FOR NBS SRM 1649 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Anthracene (ng/g)</u>					<u>Dibenz[a,h]anthracene (ng/g)</u>				
500			GC-MS	84SIM 03	410	70	44	LC	84MAY 01
					450	40	44	LC	84MAY 01
<u>Benzo[a]anthracene (ug/g)</u>					<u>Fluoranthene (ug/g)</u>				
2.4	0.1	44	LC	84MAY 01	6.8	0.4	44	LC	84MAY 01
2.4	0.1		GC	84MAY 01	7			GC-MS	84SIM 03
2.7	0.1	44	LC	84MAY 01	7	0.5	44	LC	84MAY 01
2.8	0.2	44	LC	84MAY 01	7.1	0.5	44	LC	84MAY 01
2.8	1.1		GC-MS	85GRE 01	7.3	0.2		GC	84MAY 01
3.3			GC-MS	84SIM 03	7.3	2.7		GC-MS	85GRE 01
<u>Benzo[b]fluoranthene (ug/g)</u>					<u>Indeno[1,2,3-cd]pyrene (ug/g)</u>				
6	0.3	44	LC	84MAY 01	3.3	0.3		GC	84MAY 01
6.2	0.3	44	LC	84MAY 01	3.4			GC-MS	84SIM 03
<u>Benzo[k]fluoranthene (ug/g)</u>					3.4	0.1	44	LC	84MAY 01
2	0.1	44	LC	84MAY 01	3.4	0.4	44	LC	84MAY 01
2	0.1	44	LC	84MAY 01	3.6	0.2	44	LC	84MAY 01
2.1	0.1	44	LC	84MAY 01	4	9		GC-MS	85GRE 01
<u>Benzo[ghi]perylene (ug/g)</u>					<u>Perylene (ng/g)</u>				
3.9	0.8	44	LC	84MAY 01	570			GC-MS	84SIM 03
4.1	0.1	44	LC	84MAY 01	650	20	44	LC	84MAY 01
4.4			GC-MS	84SIM 03	740	50	44	LC	84MAY 01
4.7	0.2		GC	84MAY 01	800	40	44	LC	84MAY 01
5	9		GC-MS	85GRE 01	840	90		GC	84MAY 01
5.2	0.6	44	LC	84MAY 01	900	100		GC-MS	85GRE 01
<u>Benzo[a]pyrene (ug/g)</u>					<u>Phenanthrene (ug/g)</u>				
2.2	1.4		GC-MS	85GRE 01	4.5	0.3	44	LC	84MAY 01
2.4	0.2	44	LC	84MAY 01	4.7	0.1	44	LC	84MAY 01
2.6	0.1	44	LC	84MAY 01	4.8			GC-MS	84SIM 03
2.6	0.4	44	LC	84MAY 01	4.9	1.3		GC-MS	85GRE 01
2.8			GC-MS	84SIM 03	<u>Pyrene (ug/g)</u>				
3	0.3		GC	84MAY 01	5.8			GC-MS	84SIM 03
<u>Benzo[e]pyrene (ug/g)</u>					6	0.2	44	LC	84MAY 01
3.1	1.8		GC-MS	85GRE 01	6	2.1		GC-MS	85GRE 01
3.3	0.2		GC	84MAY 01	6.2	0.2	44	LC	84MAY 01
3.6			GC-MS	84SIM 03	6.3	0.4	44	LC	84MAY 01
3.9	0.3		LC	84MAY 01	7.2	0.2		GC	84MAY 01
<u>Chrysene (ug/g)</u>					<u>Triphenylene (ug/g)</u>				
3.5	0.1	44	LC	84MAY 01	1.7	0.1		LC	84MAY 01
3.5	0.1	44	LC	84MAY 01					
3.7	0.2	44	LC	84MAY 01					
3.8	1.1		GC-MS	85GRE 01					
4.6	0.2		GC	84MAY 01					

TABLE 1818-1: COMPILED DATA FOR NBS SRM 1818 CHLORINE IN LUBRICATING BASE OIL (revised 3/1/87)

ELEMENT	UNITS	NBS
		Mean \pm SD
Cl-I	ug/g	29 \pm 5
Cl-II	ug/g	63 \pm 4
Cl-III	ug/g	78 \pm 4
Cl-IV	ug/g	231 \pm 6
Cl-V	ug/g	558 \pm 11

TABLE 1819-1: COMPILED DATA FOR NBS SRM 1819 SULFUR IN LUBRICATING BASE OIL (revised 3/1/87)

ELEMENT	UNITS	NBS
		Mean \pm SD
S-I	ug/g	299 \pm 8
S-II	ug/g	1070 \pm 40
S-III	ug/g	2865 \pm 70
S-IV	ug/g	6030 \pm 130
S-V	%	1.055 \pm 0.026

TABLE 1880-1: COMPILED DATA FOR NBS SRMs 1880-1883 CEMENTS (revised 3/1/87)

ELEMENT	UNITS	SRM			
		1880	1881	1882	1883
		NBS	NBS	NBS	NBS
Al	%	2.66	2.22	20.4	37.7
B	ug/g	< 100	< 100	---	---
Ba	ug/g	< 100	< 100	---	---
Ca	%	45.14	41.96	26.9	19.9
Cl	ug/g	200	< 100	---	---
Cr	ug/g	< 100	< 100	---	---
F	ug/g	1000	900	---	---
Fe	%	2.03	3.27	11.0	0.056
K	ug/g	7600	9710	1000	80
LOI	%	1.38	2.01	1.58	0.42
Mg	%	1.62	1.58	0.75	0.17
Mn	ug/g	560	1800	---	---
Na	ug/g	2100	300	440	2400
P	ug/g	1260	390	---	---
S	%	1.35	1.46	---	---
Si	%	9.26	10.39	1.59	0.16
Sr	ug/g	510	930	---	---
Ti	ug/g	1400	1400	11000	60
Zn	ug/g	80	80	---	---
Zr	ug/g	< 100	< 100	---	---

TABLE 2661-1: COMPILED DATA FOR NBS SRM 2661 BENZENE ON CHARCOAL (revised 3/1/86)

LEVEL	UNITS	NBS Mean \pm SD	CONSENSUS Mean (n)	METHOD
I	ug/tube	14 \pm 1	---	---
II	ug/tube	66 \pm 3	---	---
III	ug/tube	258 \pm 13	---	---
IV	ug/tube	994 \pm 30	---	---

TABLE 2661A-1: COMPILED DATA FOR NBS SRM 2661A BENZENE ON CHARCOAL (revised 3/1/86)

LEVEL	UNITS	NBS Mean \pm SD	CONSENSUS Mean (n)	METHOD
I	ug/tube	16 \pm 1	---	---
II	ug/tube	30 \pm 2	31 (1)	GC
III	ug/tube	54 \pm 2	57.9 (1)	GC

TABLE 2662-1: COMPILED DATA FOR NBS SRM 2662 M-XYLENE ON CHARCOAL (revised 3/1/86)

LEVEL	UNITS	NBS Mean \pm SD	CONSENSUS Mean (n)	METHOD
I	ug/tube	40 \pm 2	---	---
II	ug/tube	293 \pm 15	---	---
III	mg/tube	1.79 \pm 0.09	---	---
IV	mg/tube	8.38 \pm 0.38	---	---

TABLE 2663-1: COMPILED DATA FOR NBS SRM 2663 1,4-DIOXANE ON CHARCOAL (revised 3/1/86)

LEVEL	UNITS	NBS Mean \pm SD	CONSENSUS Mean (n)	METHOD
I	ug/tube	16 \pm 1	---	---
II	ug/tube	112 \pm 6	---	---
III	mg/tube	0.996 \pm 0.050	0.94 (1)	GC
IV	mg/tube	6.49 \pm 0.20	---	---

TABLE 2661A-2: INDIVIDUAL DATA FOR NBS SRM 2661A (revised 3/1/86)

Conc	Uncer	Com	Method	Reference
<u>Benzene-II (ug/tube)</u>				
31			GC	86GAU 01
<u>Benzene-III (ug/tube)</u>				
57.9			GC	85GAU 04

TABLE 2663-2: INDIVIDUAL DATA FOR NBS SRM 2663 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference
<u>1,4-Dioxane-III (mg/tube)</u>				
0.94	0.07		GC	86GAU 01

TABLE 2664-1: COMPILED DATA FOR NBS SRM 2664 ETHYLENE CHLORIDE ON CHARCOAL (revised 3/1/86)

LEVEL	UNITS	NBS Mean \pm SD	CONSENSUS Mean (n)	METHOD
I	ug/tube	98 \pm 5	100 (1)	GC
II	ug/tube	381 \pm 19	---	---
III	mg/tube	1.56 \pm 0.08	1.6 (1)	GC
IV	mg/tube	5.8 \pm 0.17	---	---

TABLE 2665-1: COMPILED DATA FOR NBS SRM 2665 CHLOROFORM ON CHARCOAL (revised 3/1/86)

LEVEL	UNITS	NBS Mean \pm SD	CONSENSUS Mean (n)	METHOD
I	ug/tube	147 \pm 7	---	---
II	ug/tube	516 \pm 26	510 (1)	GC
III	mg/tube	2.14 \pm 0.1	---	---
IV	mg/tube	6.87 \pm 0.21	---	---

TABLE 2666-1: COMPILED DATA FOR NBS SRM 2666 TRICHLOROETHYLENE ON CHARCOAL (revised 3/1/86)

LEVEL	UNITS	NBS Mean \pm SD	CONSENSUS Mean (n)	METHOD
I	ug/tube	286 \pm 14	---	---
II	mg/tube	1.03 \pm 0.05	---	---
III	mg/tube	4.09 \pm 0.20	5.3 (1)	GC
IV	mg/tube	15.4 \pm 0.5	---	---

TABLE 2667-1: COMPILED DATA FOR NBS SRM 2667 CARBON TETRACHLORIDE ON CHARCOAL (revised 3/1/86)

LEVEL	UNITS	NBS Mean \pm SD	CONSENSUS Mean (n)	METHOD
I	ug/tube	33 \pm 3	---	---
II	ug/tube	114 \pm 6	---	---
III	ug/tube	414 \pm 21	580 (1)	GC
IV	mg/tube	1.58 \pm 0.05	---	---

TABLE 2664-2: INDIVIDUAL DATA FOR NBS SRM 2664 (revised 3/1/86)

<u>Conc</u>	<u>Uncer</u>	<u>Com</u>	<u>Method</u>	<u>Reference</u>
<u>Ethylene Chloride-I (ug/tube)</u>				
100			GC	86GAU 01
<u>Ethylene Chloride-III (mg/tube)</u>				
1.6			GC	86GAU 01

TABLE 2665-2: INDIVIDUAL DATA FOR NBS SRM 2665 (revised 3/1/86)

<u>Conc</u>	<u>Uncer</u>	<u>Com</u>	<u>Method</u>	<u>Reference</u>
<u>Chloroform-II (ug/tube)</u>				
510			GC	86GAU 01

TABLE 2666-2: INDIVIDUAL DATA FOR NBS SRM 2666 (revised 3/1/86)

<u>Conc</u>	<u>Uncer</u>	<u>Com</u>	<u>Method</u>	<u>Reference</u>
<u>Trichloroethylene-III (mg/tube)</u>				
5.3			GC	86GAU 01

TABLE 2667-2: INDIVIDUAL DATA FOR NBS SRM 2667 (revised 3/1/86)

<u>Conc</u>	<u>Uncer</u>	<u>Com</u>	<u>Method</u>	<u>Reference</u>
<u>Carbon tetrachloride-III (ug/tube)</u>				
580			GC	86GAU 01

TABLE 2670-1: COMPILED DATA ON NBS SRM 2670 TRACE ELEMENTS IN URINE (revised 3/1/86)

SAMPLE	ELEMENT	UNITS	NBS		CONSENSUS Mean (n)	METHOD
			Mean \pm	SD		
Entire pool	Dimethylsulfide	ug/L	---		2.73 (1)	GC
	Dimethyltin	ug/L	---		1.04 (1)	GC
	Butyltin	ug/L	---		0.03 (1)	GC
	Ca	mg/L	105 \pm	5	---	---
	Cl	g/L	4.4		---	---
	K	g/L	1.5		---	---
	Mg	mg/L	63 \pm	3	---	---
	Na	g/L	2.62 \pm	0.14	---	---
	SO ₄	g/L	1.3		---	---
Normal	Al	ug/L	180		---	---
	As	ug/L	15		62 (1)	ICPES
	Be	ug/L	< 0.5		---	---
	Cd	ug/L	0.4		---	---
	Cr	ug/L	13		10 (1)	ICPES
	Cu	ug/L	130 \pm	20	135 (1)	ICPES
	Hg	ug/L	20		---	---
	Mn	ug/L	30		24 (1)	ICPES
	Ni	ug/L	70		61 (1)	ICPES
	Pb	ug/L	10		---	---
	Pt	ug/L	< 10		---	---
	Se	ug/L	30 \pm	8	37 (1)	ICPES
Elevated	Al	ug/L	180		---	---
	As	ug/L	480 \pm	100	504 (1)	ICPES
	Be	ug/L	33		---	---
	Cd	ug/L	88 \pm	3	85 (1)	ICPES
	Cr	ug/L	85 \pm	6	75 (1)	ICPES
	Cu	ug/L	370 \pm	30	359 (1)	ICPES
	Hg	ug/L	105 \pm	8	---	---
	Mn	ug/L	330		310 (1)	ICPES
	Ni	ug/L	300		257 (1)	ICPES
	Pb	ug/L	109 \pm	4	94 (1)	ICPES
	Pt	ug/L	110		---	---
	Se	ug/L	460 \pm	30	475 (1)	ICPES

TABLE 2670-2: INDIVIDUAL DATA FOR NBS SRM 2670 Entire Pool (revised 3/1/86)

Conc	Uncer	Com	Method	Reference
<u>(Me)2S2 (ug/L)</u>				
2.73			GC	830LS 02
<u>(Me)2Sn (ug/L)</u>				
1.04			GC	830LS 02
<u>BuSn (ug/L)</u>				
0.03			GC	830LS 02

TABLE 2670N-2: INDIVIDUAL DATA FOR NBS SRM 2670 Normal Level (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>As (ug/L)</u>					<u>Mn (ug/L)</u>				
62	36		ICPES	85KIM 01	24	2.8		ICPES	85KIM 01
<u>Cr (ug/L)</u>					<u>Ni (ug/L)</u>				
10	3.3		ICPES	85KIM 01	61	13		ICPES	85KIM 01
<u>Cu (ug/L)</u>					<u>Se (ug/L)</u>				
135	12		ICPES	85KIM 01	37	31		ICPES	85KIM 01

TABLE 2670E-2: INDIVIDUAL DATA FOR NBS SRM 2670 Elevated Level (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>As (ug/L)</u>					<u>Mn (ug/L)</u>				
504	63		ICPES	85KIM 01	310	6		ICPES	85KIM 01
<u>Cd (ug/L)</u>					<u>Ni (ug/L)</u>				
85	3.8		ICPES	85KIM 01	257	25		ICPES	85KIM 01
<u>Cr (ug/L)</u>					<u>Pb (ug/L)</u>				
75	3.2		ICPES	85KIM 01	94	20		ICPES	85KIM 01
<u>Cu (ug/L)</u>					<u>Se (ug/L)</u>				
359	12		ICPES	85KIM 01	475	36		ICPES	85KIM 01

TABLE 2671-1: COMPILED DATA ON NBS SRM 2671 FLUORIDE IN URINE (revised 3/1/86)

SAMPLE	ELEMENT	UNITS	NBS
			Mean \pm SD
Normal	F	mg/L	0.835 \pm 0.082
Elevated	F	mg/L	7.14 \pm 0.48

TABLE 2672-1: COMPILED DATA ON NBS SRM 2672 MERCURY IN URINE (revised 3/1/86)

SAMPLE	ELEMENT	UNITS	NBS	CONSENSUS	METHOD
			Mean \pm SD	Mean (n)	
Entire pool	Butyltin	ug/L	---	1.5 (1)	GC
	Methyltin	ug/L	---	1.0 (1)	GC
	Sn	ug/L	---	28.1 (1)	GC
Normal	Hg	ug/L	49.8 \pm 4.2	---	---
Elevated	Hg	ug/L	294 \pm 24	---	---

TABLE 2762-2: INDIVIDUAL DATA FOR NBS SRM 2672 Entire Pool (revised 3/1/86)

Conc	Uncer	Com	Method	Reference
<u>BuSn (ug/L)</u>				
1.5			GC	830LS 02
<u>MeSn (ug/L)</u>				
1			GC	830LS 02
<u>Sn (ug/L)</u>				
28.1			GC	830LS 02

TABLE 2674-1: COMPILED DATA FOR NBS SRM 2674 LEAD ON FILTER MEDIA (revised 3/1/86)

ELEMENT	UNITS	NBS	
		Mean \pm	SD
Pb-Blank	ug/f	1.4 \pm	0.7
Pb-I	ug/f	100 \pm	3
Pb-II	ug/f	303 \pm	9
Pb-III	mg/f	1.505 \pm	0.028

TABLE 2675-1: COMPILED DATA FOR NBS SRM 2675 BERYLLIUM ON FILTER MEDIA (revised 3/1/86)

ELEMENT	UNITS	NBS		CONSENSUS Mean (n)	METHOD
		Mean \pm	SD		
Be-I	ng/f	52 \pm	7	---	---
Be-II	ug/f	0.25 \pm	0.03	0.35 (1)	AA
Be-III	ug/f	1.0 \pm	0.1	---	---

TABLE 2675-2: INDIVIDUAL DATA FOR NBS SRM 2675 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference
<u>Be-II (ug/filter)</u>				
0.35			AA	85GAU 04

TABLE 2676-1: COMPILED DATA FOR NBS SRM 2676 METALS ON FILTER MEDIA (revised 3/1/86)

ELEMENT	UNITS	NBS	
		Mean \pm	SD
Cd-I	ng/f	500 \pm	40
Cd-II	ug/f	2.48 \pm	0.14
Cd-III	ug/f	10.1 \pm	0.4
Mn-I	ug/f	1.93 \pm	0.29
Mn-II	ug/f	10.3 \pm	1.5
Mn-III	ug/f	20.6 \pm	1.0
Pb-I	ug/f	6.8 \pm	1.1
Pb-II	ug/f	29 \pm	2.6
Pb-III	ug/f	102 \pm	6
Zn-I	ug/f	1.02 \pm	0.06
Zn-II	ug/f	5.1 \pm	0.26
Zn-III	ug/f	10.1 \pm	1.1

TABLE 2676A-1: COMPILED DATA FOR NBS SRM 2676A METALS ON FILTER MEDIA (revised 3/1/86)

ELEMENT	UNITS	NBS	CONSENSUS	METHOD
		Mean \pm SD	Mean (n)	
Cd-Blank	ug/f	---	0.03 (1)	AA
Cd-I	ug/f	1.02 \pm 0.03	---	---
Cd-II	ug/f	2.5 \pm 0.02	2.47 (1)	AA
Cd-III	ug/f	10.18 \pm 0.10	9.8 (1)	AA
Mn-I	ug/f	1.97 \pm 0.06	---	---
Mn-II	ug/f	9.89 \pm 0.1	---	---
Mn-III	ug/f	19.7 \pm 0.3	---	---
Pb-Blank	ug/f	---	0.17 (1)	AA
Pb-I	ug/f	6.96 \pm 0.2	---	---
Pb-II	ug/f	15.23 \pm 0.15	15.6 (1)	AA
Pb-III	ug/f	29.64 \pm 0.2	28.7 (1)	AA
Zn-Blank	ug/f	---	8.1 (1)	AA
Zn-I	ug/f	9.86 \pm 0.28	---	---
Zn-II	ug/f	49.52 \pm 0.48	47.6 (1)	AA
Zn-III	ug/f	99.22 \pm 0.99	95 (1)	AA

TABLE 2676A-2: INDIVIDUAL DATA FOR NBS SRM 2676A (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Cd-blank (ug/filter)</u>					<u>Pb-III (ug/filter)</u>				
0.03			AA	85GAU 04	28.7			AA	85GAU 04
<u>Cd-II (ug/filter)</u>					<u>Zn-blank (ug/filter)</u>				
2.47			AA	85GAU 04	8.1			AA	85GAU 04
<u>Cd-III (ug/filter)</u>					<u>Zn-II (ug/filter)</u>				
9.8			AA	85GAU 04	47.6			AA	85GAU 04
<u>Pb-blank (ug/filter)</u>					<u>Zn-III (ug/filter)</u>				
0.17			AA	85GAU 04	95			AA	85GAU 04
<u>Pb-II (ug/filter)</u>									
15.6			AA	85GAU 04					

TABLE 2676B-1: COMPILED DATA FOR NBS SRM 2676B METALS ON FILTER MEDIA (revised 3/1/86)

ELEMENT	UNITS	NBS	
		Mean \pm	SD
Cd-Blank	ug/f	< 0.01	
Cd-I	ug/f	0.99 \pm 0.02	
Cd-II	ug/f	2.49 \pm 0.04	
Cd-III	ug/f	10.14 \pm 0.12	
Mn-Blank	ug/f	< 0.01	
Mn-I	ug/f	1.88 \pm 0.03	
Mn-II	ug/f	9.41 \pm 0.13	
Mn-III	ug/f	18.5 \pm 0.3	
Pb-Blank	ug/f	< 0.04	
Pb-I	ug/f	7.55 \pm 0.1	
Pb-II	ug/f	14.9 \pm 0.2	
Pb-III	ug/f	30.4 \pm 0.4	
Zn-Blank	ug/f	0.4 \pm 0.1	
Zn-I	ug/f	10.01 \pm 0.14	
Zn-II	ug/f	49.7 \pm 0.7	
Zn-III	ug/f	99.5 \pm 1.2	

TABLE 2677-1: COMPILED DATA FOR NBS SRM 2677 BERYLLIUM AND ARSENIC ON FILTER MEDIA (revised 3/1/86)

ELEMENT	UNITS	NBS	
		Mean \pm	SD
As-Blank	ng/f	< 2	
As-I	ng/f	103 \pm 5	
As-II	ug/f	1.07 \pm 0.05	
As-III	ug/f	10.5 \pm 0.5	
Be-Blank	ng/f	< 1	
Be-I	ng/f	52 \pm 3	
Be-II	ng/f	256 \pm 13	
Be-III	ug/f	1.03 \pm 0.05	

TABLE 2679-1: COMPILED DATA FOR NBS SRM 2679 QUARTZ ON FILTER MEDIA (revised 3/1/86)

MATERIAL	UNITS	NBS	
		Mean \pm	SD
Clay-A	ug/f	400	
Clay-B	ug/f	370	
Clay-C	ug/f	320	
Clay-D	ug/f	200	
Quartz-A	ug/f	3.8 \pm 0.5	
Quartz-B	ug/f	29.9 \pm 3.6	
Quartz-C	ug/f	76.1 \pm 9.1	
Quartz-D	ug/f	193.2 \pm 23.2	

TABLE 2682-1: COMPILED DATA FOR NBS SRM 2682 SULFUR IN COAL (revised 3/1/86)

ELEMENT	UNITS	NBS	CONSENSUS		MEDIAN	RANGE	METHOD MEANS		
		Mean \pm SD	Mean \pm SD	(n)			Mean \pm SD	(n)	Method
ASH	%	6.37 \pm 0.18	---		---	---	---		
Ag	ng/g	---	< 1000		---	---	< 1000		
Al	ug/g	4600	4290 \pm 290	(3)	4140	4100 - 4620	4290 \pm 290	(3)	NAA
As	ug/g	1	0.89 \pm 0.16	(3)	0.96	0.7 - 1	0.89 \pm 0.16	(3)	NAA
Au	ng/g	---	< 6		---	---	< 6		
B	ug/g	39	39	(1)	---	---	39	(1)	TCGS
Ba	ug/g	382	361	(2)	---	340 - 382	361	(2)	NAA
Br	ug/g	3.7	3.5 \pm 0.3	(3)	3.64	3.1 - 3.74	3.5 \pm 0.3	(3)	NAA
C	%	75	76	(1)	---	---	76	(1)	TCGS
Ca	%	1.1	1.03	(1)	---	---	1.03	(1)	NAA
Ce	ug/g	10	9.87	(1)	---	---	9.87	(1)	NAA
Cl	ug/g	---	37	(1)	---	---	37	(1)	NAA
Co	ug/g	1.7	1.50	(2)	---	1.33 - 1.66	1.50	(2)	NAA
Cr	ug/g	15	15.2	(2)	---	15 - 15.4	15.2	(2)	NAA
Cs	ng/g	< 100	---		---	---	---		
Dy	ug/g	---	0.6	(1)	---	---	0.6	(1)	NAA
Eu	ng/g	170	156	(2)	---	140 - 172	156	(2)	NAA
Fe	ug/g	2400	2260	(2)	---	2100 - 2420	2260	(2)	NAA
Ga	ug/g	---	< 6		---	---	< 6		
H	%	4.7	4.7	(1)	---	---	4.7	(1)	TCGS
H2O-	%	18	---		---	---	---		
HEAT	btu/lb	11800 \pm 240	---		---	---	---		
Hf	ng/g	600	565	(2)	---	530 - 600	565	(2)	NAA
K	ug/g	100	117	(1)	---	---	117	(1)	NAA
La	ug/g	5.2	4.4 \pm 0.8	(3)	4.59	3.56 - 5.17	4.4 \pm 0.8	(3)	NAA
Lu	ng/g	---	< 30		---	---	< 30		
Mg	ug/g	2000	---		---	---	---		
Mn	ug/g	26	22.2	(2)	---	21.8 - 22.6	22.2	(2)	NAA
Mo	ug/g	---	< 5		---	---	< 5		
N	%	0.8	0.8	(1)	---	---	0.8	(1)	TCGS
Na	ug/g	1000	895	(2)	---	810 - 981	896	(2)	NAA
Rb	ug/g	< 2	---		---	---	---		
S	ug/g	4700 \pm 300	4700 \pm 180	(5)	4670	4470 - 4940	4690 \pm 110	(3)	CB
S	ug/g	---	---		---	---	4940	(1)	IDMS
S	ug/g	---	---		---	---	4470	(1)	TCGS
S-32/34	ratio	---	22.699	(1)	---	---	22.699	(1)	IDMS
S-33/34	ratio	---	0.1783	(1)	---	---	0.1783	(1)	IDMS
Sb	ng/g	190	189	(1)	---	---	189	(1)	NAA
Sc	ug/g	1.5	1.41	(2)	---	1.3 - 1.524	1.41	(2)	NAA
Se	ug/g	0.91	0.91	(1)	---	---	0.91	(1)	NAA
Sm	ng/g	780	704	(2)	---	633 - 776	704	(2)	NAA
Ta	ng/g	---	< 400		---	---	< 400		
Tb	ng/g	---	< 100		---	---	< 100		
Th	ug/g	1.5	1.43	(2)	---	1.33 - 1.532	1.43	(2)	NAA
Ti	ug/g	500	540	(1)	---	---	540	(1)	NAA
U	ng/g	520	490 \pm 35	(3)	500	448 - 519	490 \pm 35	(3)	NAA
V	ug/g	15	13.45	(2)	---	13 - 13.9	13.45	(2)	NAA
W	ug/g	1.8	1.46	(2)	---	1.1 - 1.81	1.46	(2)	NAA
Yb	ng/g	---	< 300		---	---	< 300		
Zn	ug/g	8.6	8.6	(1)	---	---	8.6	(1)	NAA
Zr	ug/g	---	< 100		---	---	< 100		

TABLE 2682-2: INDIVIDUAL DATA FOR NBS SRM 2682 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ag (ng/g)</u>					<u>Co (ug/g)</u>				
<	1000		ITNA	86GLA 01	1.33	0.15		ITNA	86GLA 01
					1.66	0.03		ITNA	83LIN 02
<u>Al (ug/g)</u>					<u>Cr (ug/g)</u>				
4100	200		ITNA	86GLA 01	15	0.8		ITNA	86GLA 01
4140	120		ITNA	85GAU 04	15.4	0.3		ITNA	83LIN 02
4620	20		ITNA	83LIN 02					
<u>As (ug/g)</u>					<u>Dy (ug/g)</u>				
0.7	0.3		ITNA	86GLA 01	0.6	0.2		ITNA	86GLA 01
0.96	0.06		ITNA	85GAU 04					
1	0.02		ITNA	83LIN 02	<u>Eu (ng/g)</u>				
<u>Au (ng/g)</u>					140	40		ITNA	86GLA 01
<	6		ITNA	86GLA 01	172	5		ITNA	83LIN 02
<u>B (ug/g)</u>					<u>Fe (ug/g)</u>				
39	1.3		TCGS	83LIN 02	2100	200		ITNA	86GLA 01
					2420	30		ITNA	83LIN 02
<u>Ba (ug/g)</u>					<u>Ga (ug/g)</u>				
340	20		ITNA	86GLA 01	<	6		ITNA	86GLA 01
382	5		ITNA	83LIN 02					
<u>Br (ug/g)</u>					<u>H (%)</u>				
3.1	0.3		ITNA	86GLA 01	4.7	0.13		TCGS	83LIN 02
3.64	0.19		ITNA	85GAU 04					
3.74	0.18		ITNA	83LIN 02	<u>Hf (ng/g)</u>				
<u>C (%)</u>					530	40		ITNA	86GLA 01
76	3.8		TCGS	83LIN 02	600	20		ITNA	83LIN 02
<u>Ca (%)</u>					<u>K (ug/g)</u>				
1.03	0.1		ITNA	86GLA 01	<	700		ITNA	86GLA 01
					117	14		ITNA	83LIN 02
<u>Ce (ug/g)</u>					<u>La (ug/g)</u>				
9.87	0.08		ITNA	83LIN 02	3.56	0.13		ITNA	86GLA 01
					4.59	0.14		ITNA	85GAU 04
					5.17	0.03		ITNA	83LIN 02
<u>Cl (ug/g)</u>					<u>Lu (ng/g)</u>				
<	40		ITNA	86GLA 01	<	30		ITNA	86GLA 01
37	4		ITNA	85GAU 04					

TABLE 2682-2: INDIVIDUAL DATA FOR NBS SRM 2682 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Mn (ug/g)</u>					<u>Ta (ng/g)</u>				
21.8	0.1		ITNA	86GLA 01	<	400		ITNA	86GLA 01
22.6	0.8		ITNA	85GAU 04					
<u>Mo (ug/g)</u>					<u>Tb (ng/g)</u>				
<	5		ITNA	86GLA 01	<	100		ITNA	86GLA 01
<u>N (%)</u>					<u>Th (ug/g)</u>				
0.8	0.3		TCGS	83LIN 02	1.33	0.06		ITNA	86GLA 01
					1.532	0.014		ITNA	83LIN 02
<u>Na (ug/g)</u>					<u>Ti (ug/g)</u>				
810	30		ITNA	86GLA 01	540	200		ITNA	86GLA 01
981	12		ITNA	85GAU 04					
<u>S (ug/g)</u>					<u>U (ng/g)</u>				
4470	130		TCGS	83LIN 02	448	23		DNA	86GLA 01
4600	200		CB	84GLA 11	500			DNA	86GAU 01
4670	60		CB	86GAU 01	519	15		ITNA	83LIN 02
4810	50		CB	85GLA 03					
4940	110		IDMS	84KEL 01	<u>V (ug/g)</u>				
<u>S-32/34 (ratio)</u>					13	1		ITNA	86GLA 01
22.699			IDMS	84KEL 01	13.9	0.7		ITNA	85GAU 04
<u>S-33/34 (ratio)</u>					<u>W (ug/g)</u>				
0.1783			IDMS	84KEL 01	1.1	0.3		ITNA	86GLA 01
					1.81	0.03		ITNA	83LIN 02
<u>Sb (ng/g)</u>					<u>Yb (ng/g)</u>				
<	150		ITNA	86GLA 01	<	300		ITNA	86GLA 01
189	9		ITNA	83LIN 02					
<u>Sc (ug/g)</u>					<u>Zn (ug/g)</u>				
1.3	0.1		ITNA	86GLA 01	<	10		ITNA	86GLA 01
1.524	0.005		ITNA	83LIN 02	8.6	0.9		ITNA	83LIN 02
<u>Se (ug/g)</u>					<u>Zr (ug/g)</u>				
<	1		ITNA	86GLA 01	<	100		ITNA	86GLA 01
0.91	0.1		ITNA	83LIN 02					
<u>Sm (ng/g)</u>									
633	16		ITNA	85GAU 04					
776	4		ITNA	83LIN 02					

TABLE 2683-1: COMPILED DATA FOR NBS SRM 2683 SULFUR IN COAL (revised 3/1/86)

ELEMENT	UNITS	NBS	CONSENSUS			MEDIAN	RANGE	METHOD MEANS			
		Mean \pm SD	Mean \pm SD	(n)				Mean \pm SD	(n)	Method	
ASH	%	6.85 \pm 0.02	---			---	---	---			
Ag	ng/g	---	< 900			---	---	< 900		NAA	
Al	ug/g	8600	8590	(2)		---	8580 - 8600	8590	(2)	NAA	
As	ug/g	3.6	3.82	(2)		---	3.64 - 4	3.82	(2)	NAA	
Au	ng/g	---	< 5			---	---	< 5		NAA	
B	ug/g	67	67	(1)		---	---	67	(1)	TCGS	
Ba	ug/g	71	71	(1)		---	---	71	(1)	NAA	
Br	ug/g	17	17.3	(2)		---	16.85 - 17.8	17.3	(2)	NAA	
C	%	79	79	(1)		---	---	79	(1)	TCGS	
Ca	ug/g	2000	< 2000			---	---	< 2000		NAA	
Ce	ug/g	9	9.18	(1)		---	---	9.18	(1)	NAA	
Cl	ug/g	---	1100	(1)		---	---	1100	(1)	NAA	
Co	ug/g	2.2	2.24	(2)		---	2.22 - 2.26	2.24	(2)	NAA	
Cr	ug/g	11	11.3	(2)		---	11.02 - 11.5	11.26	(2)	NAA	
Cs	ug/g	0.4	0.44	(1)		---	---	0.44	(1)	NAA	
Dy	ng/g	---	< 700			---	---	< 700		NAA	
Eu	ng/g	180	178	(2)		---	177 - 180	178.5	(2)	NAA	
Fe	ug/g	7600	7760	(2)		---	7620 - 7900	7760	(2)	NAA	
Ga	ug/g	---	< 5			---	---	< 5		NAA	
H	%	5	5.0	(1)		---	---	5.0	(1)	TCGS	
H2O-	%	1.4	---			---	---	---			
HEAT	btu/lb	14060 \pm 60	---			---	---	---			
Hf	ng/g	420	409	(2)		---	400 - 418	409	(2)	NAA	
K	ug/g	800	750	(1)		---	---	750	(1)	NAA	
La	ug/g	5.1	4.6	(2)		---	4.2 - 5.05	4.62	(2)	NAA	
Lu	ng/g	---	60	(1)		---	---	60	(1)	NAA	
Mg	ug/g	500	---			---	---	---			
Mn	ug/g	13	11.8	(1)		---	---	11.8	(1)	NAA	
Mo	ug/g	---	< 3			---	---	< 3		NAA	
N	%	1.6	1.6	(1)		---	---	1.6	(1)	TCGS	
Na	ug/g	500	500	(1)		---	---	500	(1)	NAA	
Rb	ug/g	5.3	---			---	---	---			
S	%	1.85 \pm 0.06	1.89 \pm 0.05	(5)		1.90	1.82 - 1.95	1.91 \pm 0.04	(3)	CB	
S	%	---	---			---	---	1.90	(1)	IDMS	
S	%	---	---			---	---	1.82	(1)	TCGS	
S-32/34	ratio	---	22.364	(1)		---	---	22.364	(1)	IDMS	
S-33/34	ratio	---	0.1769	(1)		---	---	0.1769	(1)	IDMS	
Sb	ng/g	280	250	(2)		---	220 - 279	250	(2)	NAA	
Sc	ug/g	1.9	1.96	(2)		---	1.94 - 1.99	1.97	(2)	NAA	
Se	ug/g	1.2	1.22	(2)		---	1.2 - 1.23	1.22	(2)	NAA	
Sm	ug/g	0.86	0.86	(1)		---	---	0.86	(1)	NAA	
Ta	ng/g	---	< 300			---	---	< 300		NAA	
Tb	ng/g	---	< 300			---	---	< 300		NAA	
Th	ug/g	1.4	1.41	(2)		---	1.36 - 1.45	1.41	(2)	NAA	
Ti	ug/g	400	440	(1)		---	---	440	(1)	NAA	
U	ng/g	420	443 \pm 22	(3)		450	418 - 460	443 \pm 22	(3)	NAA	
V	ug/g	14	15.7	(1)		---	---	15.7	(1)	NAA	
W	ng/g	480	480	(1)		---	---	480	(1)	NAA	
Yb	ng/g	---	370	(1)		---	---	370	(1)	NAA	
Zn	ug/g	9.5	9.5	(1)		---	---	9.5	(1)	NAA	
Zr	ug/g	---	< 90			---	---	< 90		NAA	

TABLE 2683-2: INDIVIDUAL DATA FOR NBS SRM 2683 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ag (ng/g)</u>					<u>Cr (ug/g)</u>				
<	900		ITNA	86GLA 01	11.02	0.18		ITNA	83LIN 02
					11.5	0.4		ITNA	86GLA 01
<u>Al (ug/g)</u>					<u>Cs (ug/g)</u>				
8580	50		ITNA	83LIN 02	0.44	0.02		ITNA	83LIN 02
8600	200		ITNA	86GLA 01					
<u>As (ug/g)</u>					<u>Dy (ng/g)</u>				
3.64	0.13		ITNA	83LIN 02	<	700		ITNA	86GLA 01
4	0.1		ITNA	86GLA 01					
<u>Au (ng/g)</u>					<u>Eu (ng/g)</u>				
<	5		ITNA	86GLA 01	177	6		ITNA	83LIN 02
					180	12		ITNA	86GLA 01
<u>B (ug/g)</u>					<u>Fe (ug/g)</u>				
67	2		TCGS	83LIN 02	7620	190		ITNA	83LIN 02
					7900	200		ITNA	86GLA 01
<u>Ba (ug/g)</u>					<u>Ga (ug/g)</u>				
<	60		ITNA	86GLA 01	<	5		ITNA	86GLA 01
71	3		ITNA	83LIN 02					
<u>Br (ug/g)</u>					<u>H (%)</u>				
16.85	0.04		ITNA	83LIN 02	5	0.1		TCGS	83LIN 02
17.8	0.6		ITNA	86GLA 01					
<u>C (%)</u>					<u>Hf (ng/g)</u>				
79	4		TCGS	83LIN 02	400	70		ITNA	86GLA 01
					418	4		ITNA	83LIN 02
<u>Ca (ug/g)</u>					<u>K (ug/g)</u>				
<	2000		ITNA	86GLA 01	<	450		ITNA	86GLA 01
					750	10		ITNA	83LIN 02
<u>Ce (ug/g)</u>					<u>La (ug/g)</u>				
9.18	0.08		ITNA	83LIN 02	4.2	0.2		ITNA	86GLA 01
<u>Cl (ug/g)</u>					5.05	0.04		ITNA	83LIN 02
1100	100		ITNA	86GLA 01					
<u>Co (ug/g)</u>					<u>Lu (ng/g)</u>				
2.22	0.09		ITNA	83LIN 02	60	7		ITNA	86GLA 01
2.26	0.04		ITNA	86GLA 01					
					<u>Mn (ug/g)</u>				
					11.8	0.2		ITNA	86GLA 01

TABLE 2683-2: INDIVIDUAL DATA FOR NBS SRM 2683 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Mo (ug/g)</u>					<u>Sm (ug/g)</u>				
<	3		ITNA	86GLA 01	0.859	0.005		ITNA	83LIN 02
<u>N (%)</u>					<u>Ta (ng/g)</u>				
1.6	0.9		TCGS	83LIN 02	<	300		ITNA	86GLA 01
<u>Na (ug/g)</u>					<u>Tb (ng/g)</u>				
500	30		ITNA	86GLA 01	<	300		ITNA	86GLA 01
<u>S (%)</u>					<u>Th (ug/g)</u>				
1.82	0.05		TCGS	83LIN 02	1.363	0.011		ITNA	83LIN 02
1.87	0.03		CB	84GLA 11	1.45	0.06		ITNA	86GLA 01
1.896	0.037		IDMS	84KEL 01	<u>Ti (ug/g)</u>				
1.91	0.03		CB	86GAU 01	440	90		ITNA	86GLA 01
1.95	0.04		CB	85GLA 03	<u>U (ng/g)</u>				
<u>S-32/34 (ratio)</u>					418	11		ITNA	83LIN 02
22.364			IDMS	84KEL 01	450			DNA	86GAU 01
<u>S-33/34 (ratio)</u>					460	40		DNA	86GLA 01
0.1769			IDMS	84KEL 01	<u>V (ug/g)</u>				
<u>Sb (ng/g)</u>					15.7	0.9		ITNA	86GLA 01
220	20		ITNA	86GLA 01	<u>W (ng/g)</u>				
279	8		ITNA	83LIN 02	<	600		ITNA	86GLA 01
<u>Sc (ug/g)</u>					480	30		ITNA	83LIN 02
1.941	0.008		ITNA	83LIN 02	<u>Yb (ng/g)</u>				
1.99	0.06		ITNA	86GLA 01	370	60		ITNA	86GLA 01
<u>Se (ug/g)</u>					<u>Zn (ug/g)</u>				
1.2	0.2		ITNA	86GLA 01	<	10		ITNA	86GLA 01
1.23	0.09		ITNA	83LIN 02	9.5	0.6		ITNA	83LIN 02
					<u>Zr (ug/g)</u>				
					<	90		ITNA	86GLA 01

TABLE 2684-1: COMPILED DATA FOR NBS SRM 2684 SULFUR IN COAL (revised 3/1/86)

ELEMENT	UNITS	NBS	CONSENSUS			MEDIAN	RANGE	METHOD MEANS		
		Mean \pm SD	Mean \pm SD	(n)				Mean \pm SD	(n)	Method
ASH	%	11.09 \pm 0.18	---		---	---	---	---		
Ag	ng/g	---	< 1200		---	---	< 1200			
Al	%	1.1	1.10	(2)	---	1.10 - 1.103	1.10	(2)	NAA	
As	ug/g	3.9	3.92	(2)	---	3.87 - 3.96	3.92	(2)	NAA	
Au	ng/g	---	< 5		---	---	< 5		NAA	
B	ug/g	114	114	(1)	---	---	114	(1)	TCGS	
Ba	ug/g	41	41.4	(1)	---	---	41.4	(1)	NAA	
Br	ug/g	11	10.4	(2)	---	10.2 - 10.6	10.4	(2)	NAA	
C	%	68	68	(1)	---	---	68	(1)	TCGS	
Ca	ug/g	4400	4800	(1)	---	---	4800	(1)	NAA	
Ce	ug/g	12	11.5	(1)	---	---	11.5	(1)	NAA	
Cl	ug/g	---	1050	(1)	---	---	1050	(1)	NAA	
Co	ug/g	3.9	3.72	(2)	---	3.6 - 3.85	3.72	(2)	NAA	
Cr	ug/g	17	16.6	(2)	---	16.4 - 16.8	16.6	(2)	NAA	
Cs	ug/g	1.2	1.15	(1)	---	---	1.15	(1)	NAA	
Dy	ug/g	---	0.96	(1)	---	---	0.96	(1)	NAA	
Eu	ng/g	230	226	(2)	---	226 - 226	226	(2)	NAA	
Fe	%	1.5	0.96	(2)	---	0.45 - 1.46	0.96	(2)	NAA	
Ga	ug/g	---	< 5		---	---	< 5		NAA	
H	%	4.8	4.8	(1)	---	---	4.8	(1)	TCGS	
H2O-	%	3.6	---		---	---	---			
HEAT	btu/lb	12760 \pm 200	---		---	---	---			
Hf	ng/g	570	568	(2)	---	565 - 570	568	(2)	NAA	
K	ug/g	2000	1850	(2)	---	1730 - 1969	1850	(2)	NAA	
La	ug/g	6.7	5.98	(2)	---	5.3 - 6.65	5.98	(2)	NAA	
Lu	ng/g	---	74	(1)	---	---	74	(1)	NAA	
Mg	ug/g	800	---		---	---	---			
Mn	ug/g	36	32	(1)	---	---	32	(1)	NAA	
Mo	ug/g	---	< 4		---	---	< 4		NAA	
N	%	1.6	1.6	(1)	---	---	1.6	(1)	TCGS	
Na	ug/g	300	240	(1)	---	---	240	(1)	NAA	
Rb	ug/g	15	14.6	(1)	---	---	14.6	(1)	NAA	
S	%	3.00 \pm 0.13	2.99 \pm 0.06	(4)	2.95	2.94 - 3.08	2.94	(1)	TCGS	
S	%	---	---		---	---	2.96	(2)	CB	
S	%	---	---		---	---	3.08	(1)	IDMS	
S-32/34	ratio	---	22.726	(1)	---	---	22.726	(1)	IDMS	
S-33/34	ratio	---	0.1782	(1)	---	---	0.1782	(1)	IDMS	
Sb	ng/g	350	372	(2)	---	354 - 390	372	(2)	NAA	
Sc	ug/g	2.7	2.64	(2)	---	2.62 - 2.66	2.64	(2)	NAA	
Se	ug/g	1.9	1.82	(2)	---	1.77 - 1.87	1.82	(2)	NAA	
Sm	ug/g	1.1	1.11	(1)	---	---	1.11	(1)	NAA	
Ta	ng/g	---	< 300		---	---	< 300		NAA	
Tb	ng/g	---	< 200		---	---	< 200		NAA	
Ti	ug/g	2	1.98	(2)	---	1.96 - 2.00	1.98	(2)	NAA	
Ti	ug/g	600	580	(1)	---	---	580	(1)	NAA	
U	ug/g	0.9	0.88 \pm 0.02	(3)	0.88	0.87 - 0.90	0.88 \pm 0.02	(3)	NAA	
V	ug/g	22	22	(1)	---	---	22	(1)	NAA	
W	ng/g	560	562	(1)	---	---	562	(1)	NAA	
Yb	ng/g	---	510	(1)	---	---	510	(1)	NAA	
Zn	ug/g	110	110	(2)	---	110 - 110	110	(2)	NAA	
Zr	ug/g	---	< 120		---	---	< 120		NAA	

TABLE 2684-2: INDIVIDUAL DATA FOR NBS SRM 2684 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ag (ng/g)</u>					<u>Cr (ug/g)</u>				
<	1200		ITNA	86GLA 01	16.4	0.9		ITNA	86GLA 01
					16.8	0.3		ITNA	83LIN 02
<u>Al (%)</u>					<u>Cs (ug/g)</u>				
1.1	0.04		ITNA	86GLA 01	1.15	0.05		ITNA	83LIN 02
1.103	0.006		ITNA	83LIN 02					
<u>As (ug/g)</u>					<u>Dy (ug/g)</u>				
3.87	0.14		ITNA	83LIN 02	0.96	0.06		ITNA	86GLA 01
3.96	0.14		ITNA	86GLA 01					
<u>Au (ng/g)</u>					<u>Eu (ng/g)</u>				
<	5		ITNA	86GLA 01	226	9		ITNA	83LIN 02
					226	20		ITNA	86GLA 01
<u>B (ug/g)</u>					<u>Fe (%)</u>				
114	3		TCGS	83LIN 02	0.454	0.026		ITNA	83LIN 02
					1.46	0.04		ITNA	86GLA 01
<u>Ba (ug/g)</u>					<u>Ga (ug/g)</u>				
<	80		ITNA	86GLA 01					
41.4	2.6		ITNA	83LIN 02	<	5		ITNA	86GLA 01
<u>Br (ug/g)</u>					<u>H (%)</u>				
10.2	0.2		ITNA	86GLA 01	4.8	0.1		TCGS	83LIN 02
10.6	0.5		ITNA	83LIN 02					
<u>C (%)</u>					<u>Hf (ng/g)</u>				
68	2		TCGS	83LIN 02	565	12		ITNA	83LIN 02
					570	7		ITNA	86GLA 01
<u>Ca (ug/g)</u>					<u>K (ug/g)</u>				
4800	400		ITNA	86GLA 01	1730	140		ITNA	86GLA 01
					1969	16		ITNA	83LIN 02
<u>Ce (ug/g)</u>					<u>La (ug/g)</u>				
11.5	0.2		ITNA	83LIN 02	5.3	0.13		ITNA	86GLA 01
<u>Cl (ug/g)</u>					6.65	0.1		ITNA	83LIN 02
1050	100		ITNA	86GLA 01					
<u>Co (ug/g)</u>					<u>Lu (ng/g)</u>				
3.6	0.2		ITNA	86GLA 01	74	5		ITNA	86GLA 01
3.85	0.05		ITNA	83LIN 02					
					<u>Mn (ug/g)</u>				
					32	0.2		ITNA	86GLA 01

TABLE 2684-2: INDIVIDUAL DATA FOR NBS SRM 2684 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Mo (ug/g)</u>					<u>Tb (ng/g)</u>				
<	4		ITNA	86GLA 01	<	200		ITNA	86GLA 01
<u>N (%)</u>					<u>Th (ug/g)</u>				
1.6	0.4		TCGS	83LIN 02	1.955	0.016		ITNA	83LIN 02
					2	0.08		ITNA	86GLA 01
<u>Na (ug/g)</u>					<u>Ti (ug/g)</u>				
240	20		ITNA	86GLA 01	580	60		ITNA	86GLA 01
<u>Rb (ug/g)</u>					<u>U (ug/g)</u>				
14.6	1.1		ITNA	83LIN 02	0.87	0.02		DNA	86GLA 01
<u>S (%)</u>					0.88			DNA	86GAU 01
2.94	0.07		TCGS	83LIN 02	0.901	0.01		ITNA	83LIN 02
2.95	0.03		CB	86GAU 01	<u>V (ug/g)</u>				
2.98	0.08		CB	85GLA 03	22	4		ITNA	86GLA 01
3.076	0.09		IDMS	84KEL 01	<u>W (ng/g)</u>				
<u>S-32/34 (ratio)</u>					<	700		ITNA	86GLA 01
22.726			IDMS	84KEL 01	562	22		ITNA	83LIN 02
<u>S-33/34 (ratio)</u>					<u>Yb (ng/g)</u>				
0.1782			IDMS	84KEL 01	510	50		ITNA	86GLA 01
<u>Sb (ng/g)</u>					<u>Zn (ug/g)</u>				
354	8		ITNA	83LIN 02	110	11		ITNA	86GLA 01
390	50		ITNA	86GLA 01	110	12		ITNA	83LIN 02
<u>Sc (ug/g)</u>					<u>Zr (ug/g)</u>				
2.62	0.1		ITNA	86GLA 01	<	120		ITNA	86GLA 01
2.665	0.02		ITNA	83LIN 02					
<u>Se (ug/g)</u>									
1.77	0.13		ITNA	86GLA 01					
1.87	0.16		ITNA	83LIN 02					
<u>Sm (ug/g)</u>									
1.109	0.012		ITNA	83LIN 02					
<u>Ta (ng/g)</u>									
<	300		ITNA	86GLA 01					

TABLE 2685-1: COMPILED DATA FOR NBS SRM 2685 SULFUR IN COAL (revised 3/1/86)

ELEMENT	UNITS	NBS		CONSENSUS			MEDIAN	RANGE	METHOD MEANS			
		Mean \pm	SD	Mean \pm	SD	(n)			Mean \pm	SD	(n)	Method
ASH	%	16.53 \pm	0.15	---	---	---	---	---	---	---	---	---
Ag	ng/g	---	---	< 1500	---	---	---	---	< 1500	---	---	NAA
Al	%	1.7	---	1.66	(2)	---	---	1.64 - 1.67	1.65	(2)	---	NAA
As	ug/g	12	---	12.6	(2)	---	---	12.3 - 12.9	12.6	(2)	---	NAA
Au	ng/g	---	---	< 6	---	---	---	---	< 6	---	---	NAA
B	ug/g	109	---	109	(1)	---	---	---	109	(1)	---	TCGS
Ba	ug/g	105	---	105	(1)	---	---	---	105	(1)	---	NAA
Br	ug/g	5.6	---	5.84	(2)	---	---	5.57 - 6.1	5.84	(2)	---	NAA
C	%	66	---	66	(1)	---	---	---	66	(1)	---	TCGS
Ca	ug/g	5200	---	5600	(1)	---	---	---	5600	(1)	---	NAA
Ce	ug/g	18	---	17.9	(1)	---	---	---	17.9	(1)	---	NAA
Cl	ug/g	---	---	520	(1)	---	---	---	520	(1)	---	NAA
Co	ug/g	4.6	---	4.58	(2)	---	---	4.57 - 4.6	4.58	(2)	---	NAA
Cr	ug/g	22	---	22.4	(2)	---	---	22.3 - 22.6	22.4	(2)	---	NAA
Cs	ug/g	1.3	---	1.31	(1)	---	---	---	1.31	(1)	---	NAA
Dy	ug/g	---	---	1.35	(1)	---	---	---	1.35	(1)	---	NAA
Eu	ng/g	360	---	344	(2)	---	---	330 - 357	344	(2)	---	NAA
Fe	%	2.9	---	2.45	(2)	---	---	2.40 - 2.51	2.45	(2)	---	NAA
Ga	ug/g	---	---	< 7	---	---	---	---	< 7	---	---	NAA
H	%	4.6	---	4.6	(1)	---	---	---	4.6	(1)	---	TCGS
H2O-	%	1.8	---	---	---	---	---	---	---	---	---	---
HEAT	btu/lb	12100 \pm	180	---	---	---	---	---	---	---	---	---
Hf	ug/g	0.91	---	0.93	(2)	---	---	0.913 - 0.94	0.93	(2)	---	NAA
K	ug/g	2600	---	2421	(2)	---	---	2250 - 2592	2421	(2)	---	NAA
La	ug/g	10	---	9.4	(2)	---	---	8.6 - 10.2	9.4	(2)	---	NAA
Lu	ng/g	---	---	116	(1)	---	---	---	116	(1)	---	NAA
Mg	ug/g	1000	---	---	---	---	---	---	---	---	---	---
Mn	ug/g	41	---	38	(1)	---	---	---	38	(1)	---	NAA
Mo	ug/g	---	---	< 5	---	---	---	---	< 5	---	---	NAA
N	%	1.1	---	1.1	(1)	---	---	---	1.1	(1)	---	TCGS
Na	ug/g	800	---	755	(1)	---	---	---	755	(1)	---	NAA
Rb	ug/g	17	---	16.8	(1)	---	---	---	16.8	(1)	---	NAA
S	%	4.62 \pm	0.18	4.68 \pm	0.06	(4)	4.64	4.62 - 4.76	4.66	(2)	---	CB
S	%	---	---	---	---	---	---	---	4.64	(1)	---	TCGS
S	%	---	---	---	---	---	---	---	4.76	(1)	---	IDMS
S-32/34	ratio	---	---	22.546	(1)	---	---	---	22.546	(1)	---	IDMS
S-33/34	ratio	---	---	0.1777	(1)	---	---	---	0.1777	(1)	---	IDMS
Sb	ng/g	360	---	363	(2)	---	---	357 - 370	363	(2)	---	NAA
Sc	ug/g	3.7	---	3.72	(2)	---	---	3.7 - 3.73	3.72	(2)	---	NAA
Se	ug/g	1.9	---	1.91	(1)	---	---	---	1.91	(1)	---	NAA
Sm	ug/g	1.7	---	1.73	(1)	---	---	---	1.73	(1)	---	NAA
Ta	ng/g	---	---	240	(1)	---	---	---	240	(1)	---	NAA
Tb	ng/g	---	---	< 200	---	---	---	---	< 200	---	---	NAA
Th	ug/g	2.7	---	2.66	(2)	---	---	2.65 - 2.66	2.66	(2)	---	NAA
Ti	ug/g	900	---	910	(1)	---	---	---	910	(1)	---	NAA
U	ug/g	0.95	---	0.957 \pm	0.012	(3)	0.952	0.948 - 0.97	0.957 \pm	0.012	(3)	NAA
V	ug/g	31	---	31	(1)	---	---	---	31	(1)	---	NAA
W	ug/g	1.2	---	1.18	(1)	---	---	---	1.18	(1)	---	NAA
Yb	ng/g	---	---	660	(1)	---	---	---	660	(1)	---	NAA
Zn	ug/g	17	---	17.1	(1)	---	---	---	17.1	(1)	---	NAA
Zr	ug/g	---	---	< 150	---	---	---	---	< 150	---	---	NAA

TABLE 2685-2: INDIVIDUAL DATA FOR NBS SRM 2685 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ag (ng/g)</u>					<u>Cr (ug/g)</u>				
<	1500		ITNA	86GLA 01	22.3	0.4		ITNA	83LIN 02
					22.6	0.8		ITNA	86GLA 01
<u>Al (%)</u>					<u>Cs (ug/g)</u>				
1.64	0.04		ITNA	86GLA 01	1.31	0.07		ITNA	83LIN 02
1.669	0.007		ITNA	83LIN 02					
<u>As (ug/g)</u>					<u>Dy (ug/g)</u>				
12.28	0.38		ITNA	83LIN 02	1.35	0.11		ITNA	86GLA 01
12.9	0.6		ITNA	86GLA 01					
<u>Au (ng/g)</u>					<u>Eu (ng/g)</u>				
<	6		ITNA	86GLA 01	330	40		ITNA	86GLA 01
					357	4		ITNA	83LIN 02
<u>B (ug/g)</u>					<u>Fe (%)</u>				
109	5		TCGS	83LIN 02	2.396	0.065		ITNA	83LIN 02
					2.51	0.16		ITNA	86GLA 01
<u>Ba (ug/g)</u>					<u>Ga (ug/g)</u>				
<	80		ITNA	86GLA 01					
105	6		ITNA	83LIN 02	<	7		ITNA	86GLA 01
<u>Br (ug/g)</u>					<u>H (%)</u>				
5.57	0.07		ITNA	83LIN 02	4.6	0.2		TCGS	83LIN 02
6.1	0.5		ITNA	86GLA 01					
<u>C (%)</u>					<u>Hf (ug/g)</u>				
66	3		TCGS	83LIN 02	0.913	0.011		ITNA	83LIN 02
					0.94	0.005		ITNA	86GLA 01
<u>Ca (ug/g)</u>					<u>K (ug/g)</u>				
5600	600		ITNA	86GLA 01	2250	200		ITNA	86GLA 01
					2592	45		ITNA	83LIN 02
<u>Ce (ug/g)</u>					<u>La (ug/g)</u>				
17.88	0.18		ITNA	83LIN 02	8.6	0.4		ITNA	86GLA 01
<u>Cl (ug/g)</u>					10.19	0.11		ITNA	83LIN 02
520	40		ITNA	86GLA 01	<u>Lu (ng/g)</u>				
<u>Co (ug/g)</u>					116	30		ITNA	86GLA 01
4.57	0.06		ITNA	83LIN 02	<u>Mn (ug/g)</u>				
4.6	0.2		ITNA	86GLA 01	38	1		ITNA	86GLA 01

TABLE 2685-2: INDIVIDUAL DATA FOR NBS SRM 2685 (cont.)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Mo (ug/g)</u>					<u>Tb (ng/g)</u>				
<	5		ITNA	86GLA 01	<	200		ITNA	86GLA 01
<u>N (%)</u>					<u>Th (ug/g)</u>				
1.1	0.3		TCGS	83LIN 02	2.65	0.1		ITNA	86GLA 01
					2.66	0.03		ITNA	83LIN 02
<u>Na (ug/g)</u>					<u>Ti (ug/g)</u>				
755	50		ITNA	86GLA 01	910	80		ITNA	86GLA 01
<u>Rb (ug/g)</u>					<u>U (ug/g)</u>				
16.8	1.3		ITNA	83LIN 02	0.948	0.013		ITNA	83LIN 02
<u>S (%)</u>					0.952	0.005		DNA	86GLA 01
4.62	0.07		CB	85GLA 03	0.97			DNA	86GAU 01
4.64	0.19		TCGS	83LIN 02	<u>V (ug/g)</u>				
4.7	0.02		CB	86GAU 01	31	1		ITNA	86GLA 01
4.76	0.19		IDMS	84KEL 01	<u>W (ug/g)</u>				
<u>S-32/34 (ratio)</u>					<	1.5		ITNA	86GLA 01
22.546			IDMS	84KEL 01	1.18	0.06		ITNA	83LIN 02
<u>S-33/34 (ratio)</u>					<u>Yb (ng/g)</u>				
0.1777			IDMS	84KEL 01	660	120		ITNA	86GLA 01
<u>Sb (ng/g)</u>					<u>Zn (ug/g)</u>				
357	12		ITNA	83LIN 02	<	10		ITNA	86GLA 01
370	30		ITNA	86GLA 01	17.1	1.1		ITNA	83LIN 02
<u>Sc (ug/g)</u>					<u>Zr (ug/g)</u>				
3.7	0.019		ITNA	83LIN 02	<	150		ITNA	86GLA 01
3.73	0.13		ITNA	86GLA 01					
<u>Se (ug/g)</u>									
<	3		ITNA	86GLA 01					
1.91	0.16		ITNA	83LIN 02					
<u>Sm (ug/g)</u>									
1.729	0.007		ITNA	83LIN 02					
<u>Ta (ng/g)</u>									
240	70		ITNA	86GLA 01					

TABLE 2689-1: COMPILED DATA FOR NBS SRMs 2689-2691 FLY ASH (revised 3/1/87)

ELEMENT	UNITS	NBS		
		2689	2690	2691
		Mean	Mean	Mean
Al	%	12.94	12.35	9.81
Ba	ug/g	800	6500	6600
Ca	%	2.18	5.71	18.45
Fe	%	9.32	3.57	4.42
H2O-	%	0.14	0.12	0.08
K	%	2.14	1.00	0.33
LOI	%	1.76	0.53	0.23
Mg	%	0.61	1.53	3.12
Mn	ug/g	300	300	200
Na	%	0.25	0.24	1.09
P	ug/g	1000	5200	5100
S	ug/g	---	1500	8300
Si	%	24.06	25.85	16.83
Sr	ug/g	700	2000	2700
Ti	ug/g	7500	5200	9000

TABLE 2694-1: COMPILED DATA FOR NBS SRM 2694 SIMULATED RAINWATER (revised 3/1/87)

PARAMETER	UNITS	NBS	
		I	II
		Mean \pm SD	Mean \pm SD
Acidity	meq/L	0.050 \pm 0.002	0.284 \pm 0.005
Ca	ug/L	14 \pm 3	49 \pm 11
Cl	mg/L	0.24	1.0
Conductivity	uS/cm	26 \pm 2	130 \pm 2
F	ug/L	54 \pm 2	98 \pm 7
K	ug/L	52 \pm 7	106 \pm 8
Mg	ug/L	24 \pm 2	51 \pm 3
Na	ug/L	205 \pm 9	419 \pm 15
NH4-N	mg/L	---	1.0
NO3-N	mg/L	---	7.06 \pm 0.15
pH	units	4.27 \pm 0.03	3.59 \pm 0.02
SO4	mg/L	2.75 \pm 0.05	10.9 \pm 0.2

TABLE 4350-1: COMPILED DATA FOR NBS SRM 4350 ENVIRONMENTAL RADIOACTIVITY STANDARD, RIVER SEDIMENT (revised 3/1/86)
(Activities shown as of 1 January 1975)

NUCLIDE	UNITS	NBS Mean \pm SD	CONSENSUS Mean \pm SD (n)	MEDIAN	RANGE	METHOD
Ac-228	pCi/g	0.92 \pm 0.18	---	---	---	---
Ac-228	mBq/g	34 \pm 6.5	---	---	---	---
Am-241	pCi/g	0.0084	< 0.007	---	---	GAMMA
Am-241	mBq/g	0.314	---	---	---	---
Bi-212	mBq/g	50	---	---	---	---
Bi-212	pCi/g	1.4	---	---	---	---
Bi-214	mBq/g	34	---	---	---	---
Bi-214	pCi/g	0.92	---	---	---	---
Cm-244	mBq/g	0.0015	---	---	---	---
Co-60	pCi/g	4.00 \pm 0.22	---	---	---	---
Co-60	mBq/g	148 \pm 8	---	---	---	---
Cs-137	pCi/g	2.7 \pm 0.12	2.83 \pm 0.30 (4)	2.7	2.5 - 3.18	GAMMA
Cs-137	mBq/g	100 \pm 4.5	---	---	---	---
Eu-152	pCi/g	6.5 \pm 0.38	7.11 (1)	---	---	GAMMA
Eu-152	mBq/g	240 \pm 14	---	---	---	---
Eu-154	pCi/g	1.4 \pm 0.1	1.17 (1)	---	---	GAMMA
Eu-154	mBq/g	52 \pm 4	---	---	---	---
Eu-155	pCi/g	0.38	---	---	---	---
Eu-155	mBq/g	14	---	---	---	---
Fe-55	pCi/g	43	---	---	---	---
Fe-55	mBq/g	1600	---	---	---	---
I	ng/g	---	5400 (1)	---	---	NAA
I-129	FCI/G	---	0.032 (1)	---	---	NAA
K-40	pCi/g	14.6 \pm 1.3	15.2 (1)	---	---	GAMMA
K-40	mBq/g	540 \pm 50	---	---	---	---
Mn-54	pCi/g	0.057 \pm 0.007	---	---	---	---
Mn-54	mBq/g	2.1 \pm 0.2	---	---	---	---
Pa-231	pCi/g	0.047	---	---	---	---
Pa-231	mBq/g	1.75	---	---	---	---
Pb-212	pCi/g	1.6	---	---	---	---
Pb-212	mBq/g	60	---	---	---	---
Pb-214	pCi/g	1.1	---	---	---	---
Pb-214	mBq/g	41	---	---	---	---
Pu-238	pCi/g	0.002	---	---	---	---
Pu-238	mBq/g	0.067	---	---	---	---
Pu-239	pCi/g	0.038 \pm 0.003	0.033 (1)	---	---	AS
Pu-239	mBq/g	1.4 \pm 0.12	---	---	---	---
Ra-226	pCi/g	0.84	---	---	---	---
Ra-226	mBq/g	31	---	---	---	---
Sb-125	pCi/g	0.095	---	---	---	---
Sb-125	mBq/g	3.5	---	---	---	---
Sr-90	pCi/g	0.278 \pm 0.042	---	---	---	---
Sr-90	mBq/g	10.3 \pm 1.6	---	---	---	---
Th-228	pCi/g	1.07	---	---	---	---
Th-228	mBq/g	39.5	---	---	---	---
Th-230	pCi/g	0.988	---	---	---	---
Th-230	mBq/g	36.6	---	---	---	---

TABLE 4350-1: COMPILED DATA FOR NBS SRM 4350 ENVIRONMENTAL RADIOACTIVITY STANDARD, RIVER SEDIMENT (cont.)

NUCLIDE	UNITS	NBS		CONSENSUS		MEDIAN	RANGE	METHOD
		Mean \pm	SD	Mean \pm	SD (n)			
Th-232	pCi/g	0.84		---		---	---	---
Th-232	mBq/g	34.4		---		---	---	---
Tl-208	pCi/g	0.38		---		---	---	---
Tl-208	mBq/g	14		---		---	---	---
U	ug/g	---		0.9	(1)	---	---	NAA
U-234	pCi/g	1.34		---		---	---	---
U-234	mBq/g	49.6		---		---	---	---
U-235	pCi/g	0.05		---		---	---	---
U-235	mBq/g	1.85		---		---	---	---
U-238	pCi/g	1.14		---		---	---	---
U-238	mBq/g	42.2		---		---	---	---
Zn-65	pCi/g	0.35 \pm 0.047		---		---	---	---
Zn-65	mBq/g	13 \pm 1.8		---		---	---	---

TABLE 4350-2: INDIVIDUAL DATA FOR NBS SRM 4350 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Am-241 (pCi/g)</u>					<u>I (ng/g)</u>				
<	0.007		GAMMA	86GAU 01	5400	5000		RTNA	79BRA 01
<u>Cs-137 (pCi/g)</u>					<u>I-129 (fCi/g)</u>				
2.5	0.35		GAMMA	84GLA 02	0.032	0.037		RTNA	79BRA 01
2.7	0.2		GAMMA	86GAU 01					
2.95	0.18		GAMMA	85GAU 04	<u>K-40 (pCi/g)</u>				
3.18			GAMMA	84GLA 11	15.2			GAMMA	86GAU 01
<u>Eu-152 (pCi/g)</u>					<u>Pu-239 (pCi/g)</u>				
7.11			GAMMA	84GLA 11	0.033	0.001		AS	81CAR 01
<u>Eu-154 (pCi/g)</u>					<u>U (ug/g)</u>				
1.17			GAMMA	84GLA 11	0.9			DNA	84GLA 11

TABLE 4350B-1: COMPILED DATA FOR NBS SRM 4350B ENVIRONMENTAL RADIOACTIVITY, RIVER SEDIMENT (revised 3/1/86)
(Activity as of 9 September 1981)

NUCLIDE	UNITS	NBS		CONSENSUS			MEDIAN	RANGE	METHOD
		Mean \pm	SD	Mean \pm	SD	(n)			
Ac-228	pCi/g	---		1.2		(1)	---	---	GAMMA
Am-241	pCi/g	0.0040 \pm 0.0008		0.005		(1)	---	---	AS
Am-241	mBq/g	0.15 \pm 0.03		---			---	---	---
Co-60	pCi/g	0.125 \pm 0.006		0.12		(2)	---	0.11 - 0.13	GAMMA
Co-60	mBq/g	4.64 \pm 0.23		---			---	---	---
Cs-137	pCi/g	0.783 \pm 0.049		0.842 \pm 0.070		(5)	0.81	0.79 - 0.96	GAMMA
Cs-137	mBq/g	29.0 \pm 1.8		---			---	---	---
Eu-152	pCi/g	0.824 \pm 0.033		1.16		(1)	---	---	GAMMA
Eu-152	mBq/g	30.5 \pm 1.2		---			---	---	---
Eu-154	pCi/g	0.102 \pm 0.015		< 0.3			---	---	GAMMA
Eu-154	mBq/g	3.78 \pm 0.57		---			---	---	---
Fe-55	pCi/g	0.46		---			---	---	---
Fe-55	mBq/g	17		---			---	---	---
K-40	pCi/g	15		15.13		(1)	---	---	GAMMA
K-40	mBq/g	560		---			---	---	---
Pu-238	FCI/G	0.35 \pm 0.06		0.2		(1)	---	---	AS
Pu-238	mBq/g	0.013 \pm 0.002		---			---	---	---
Pu-239	pCi/g	0.0137 \pm 0.0008		0.0133		(2)	---	0.0116 - 0.0150	AS
Pu-239	mBq/g	0.508 \pm 0.029		---			---	---	---
Ra-226	pCi/g	0.967 \pm 0.097		1.99		(1)	---	---	GAMMA
Ra-226	mBq/g	35.8 \pm 3.6		---			---	---	---
Sr-90	pCi/g	0.14		---			---	---	---
Sr-90	mBq/g	5.3		---			---	---	---
Th-228	pCi/g	0.904		1.03		(1)	---	---	AS
Th-228	mBq/g	33.5		---			---	---	---
Th-230	pCi/g	0.796		0.735		(2)	---	0.67 - 0.8	AS
Th-230	mBq/g	29.5		---			---	---	---
Th-232	pCi/g	0.896		1.07		(1)	---	---	AS
Th-232	mBq/g	33.2		---			---	---	---
U	ug/g	---		2.43		(1)	---	---	NAA
U-234	pCi/g	0.896		---			---	---	---
U-234	mBq/g	33.2		---			---	---	---
U-235	pCi/g	0.046		---			---	---	---
U-235	mBq/g	1.7		---			---	---	---
U-238	pCi/g	0.832		---			---	---	---
U-238	mBq/g	30.8		---			---	---	---

TABLE 4350B-2: INDIVIDUAL DATA FOR NBS SRM 4350B (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ac-228 (pCi/g)</u>					<u>Pu-238 (fCi/g)</u>				
1.2	0.43		GAMMA	83KIM 01	<	10		RAS	86GAU 01
					0.2	0.8		AS	84GLA 02
<u>Am-241 (pCi/g)</u>					<u>Pu-239 (pCi/g)</u>				
<	0.006		GAMMA	86GAU 01	0.0116	0.0025		AS	84GLA 02
0.005			AS	84GLA 02	0.015			RAS	86GAU 01
<u>Co-60 (pCi/g)</u>					<u>Ra-226 (pCi/g)</u>				
0.11	0.03		GAMMA	84KRI 01	1.99	0.21		GAMMA	84KRI 01
0.13	0.01		GAMMA	82JEN 03	<u>Th-228 (pCi/g)</u>				
<u>Cs-137 (pCi/g)</u>					1.03	0.03		AS	85JOS 01
0.79	0.08		GAMMA	86GAU 01	<u>Th-230 (pCi/g)</u>				
0.8	0.1		GAMMA	85GAU 04	0.67	0.05		AS	85JOS 01
0.81	0.01		GAMMA	84KRI 01	0.8			AS	84GLA 02
0.85	0.08		GAMMA	84GLA 02	<u>Th-232 (pCi/g)</u>				
0.96	0.12		GAMMA	84GLA 11	1.07	0.06		AS	85JOS 01
<u>Eu-152 (pCi/g)</u>					<u>U (ug/g)</u>				
1.16	0.12		GAMMA	84GLA 11	2.43	0.05		DNA	85GAU 04
<u>Eu-154 (pCi/g)</u>									
<	0.3		GAMMA	84GLA 11					
<u>K-40 (pCi/g)</u>									
15.13	0.63		GAMMA	84KRI 01					

TABLE 4351-1: COMPILED DATA FOR NBS SRMs 4351 and 4352 ENVIRONMENTAL RADIOACTIVITY
(Human Lung and Human Liver)

ELEMENT	UNITS	NBS	
		4351 (lung) Mean \pm SD	4352 (liver) Mean \pm SD
Am-241	mBq/g	0.11	0.15 \pm 0.06
Am-241	pCi/g	0.003	0.0040 \pm 0.0015
Pu-238	mBq/g	---	0.055 \pm 0.024
Pu-238	pCi/g	---	0.0015 \pm 0.0006
Pu-238/239	ratio	0.0150 \pm 0.0030	---
Pu-239	mBq/g	1.1 \pm 1.2	2.06 \pm 0.39
Pu-239	pCi/g	0.0030 \pm 0.0003	0.0556 \pm 0.0106
Th-228	mBq/g	0.22	0.51
Th-228	pCi/g	0.0059	0.014
Th-230	mBq/g	0.2	0.2
Th-230	pCi/g	0.0054	0.0054
Th-232	mBq/g	0.21 \pm 0.03	0.058
Th-232	pCi/g	0.0057 \pm 0.0007	0.0016
U-234	mBq/g	0.10 \pm 0.025	0.1
U-234	pCi/g	0.0027 \pm 0.0007	0.0027
U-235	mBq/g	---	0.009
U-235	pCi/g	---	0.0002
U-238	mBq/g	0.100 \pm 0.011	0.088
U-238	pCi/g	0.0027 \pm 0.0003	0.0024

TABLE 4353-1: COMPILED DATA FOR NBS SRM 4353 ENVIRONMENTAL RADIOACTIVITY - ROCKY FLATS SOIL #1 (revised 3/1/86)
(Activity as of 15 Dec. 1980)

ELEMENT	UNITS	NBS		CONSENSUS		MEDIAN	RANGE	METHOD MEANS	
		Mean \pm SD		Mean \pm SD	(n)			Mean \pm SD	(n) Method
Ac-228	mBq/g	69.8 \pm 3.6		---		---	---	---	
Ac-228	pCi/g	1.88 \pm 0.10		2.48	(1)	---	---	2.48	(1) GAMMA
Am-241	mBq/g	1.25 \pm 0.09		---		---	---	---	
Am-241	pCi/g	0.0338 \pm 0.0025		0.035 \pm 0.008	(4)	0.0350	0.024 - 0.042	0.039 \pm 0.004	(3) AS
Am-241	pCi/g	---		---		---	---	0.024	(1) GAMMA
Cs-137	mBq/g	17.6 \pm 0.8		---		---	---	---	
Cs-137	pCi/g	0.464 \pm 0.021		0.56 \pm 0.08	(4)	0.52	0.48 - 0.67	0.5575 \pm 0.0818	(4) GAMMA
Fe-55	mBq/g	2.49		---		---	---	---	
Fe-55	pCi/g	0.0670		---		---	---	---	
K-40	mBq/g	723 \pm 70		---		---	---	---	
K-40	pCi/g	19.5 \pm 1.9		25	(1)	---	---	25	(1) GAMMA
Pu-238	mBq/g	0.166 \pm 0.018		---		---	---	---	
Pu-238	pCi/g	0.0045 \pm 0.0005		0.0038	(2)	---	0.0035 - 0.0040	0.0038	(2) AS
Pu-239	mBq/g	8.03 \pm 0.60		---		---	---	---	
Pu-239	pCi/g	0.217 \pm 0.016		0.214 \pm 0.008	(7)	0.212	0.202 - 0.221	0.214 \pm 0.008	(7) AS
Ra-226	mBq/g	43.0 \pm 2.8		---		---	---	---	
Ra-226	pCi/g	1.16 \pm 0.08		1.03	(1)	---	---	1.03	(1) GAMMA
Sr-90	mBq/g	7.63 \pm 0.78		---		---	---	---	
Sr-90	pCi/g	0.206 \pm 0.021		---		---	---	---	
Th-228	mBq/g	70.8 \pm 3.6		---		---	---	---	
Th-228	pCi/g	1.91 \pm 0.1		1.97	(1)	---	---	1.97	(1) AS
Th-230	mBq/g	44.3 \pm 2.3		---		---	---	---	
Th-230	pCi/g	1.20 \pm 0.06		1.04	(2)	---	0.88 - 1.2	1.04	(2) AS
Th-232	mBq/g	69.3 \pm 3.5		---		---	---	---	
Th-232	pCi/g	1.87 \pm 0.10		1.93	(1)	---	---	1.93	(1) AS
U	ug/g	---		3.04	(1)	---	---	3.04	(1) NAA
U-234	mBq/g	39.1 \pm 1.4		---		---	---	---	
U-234	pCi/g	1.06 \pm 0.04		---		---	---	---	
U-235	mBq/g	1.9		---		---	---	---	
U-235	pCi/g	0.051		---		---	---	---	
U-238	mBq/g	38.9 \pm 2.0		---		---	---	---	
U-238	pCi/g	1.05 \pm 0.05		1.45	(1)	---	---	1.45	(1) GAMMA

TABLE 4353-2: INDIVIDUAL DATA FOR NBS SRM 4353 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Ac-228 (pCi/g)</u>					<u>Pu-239 (pCi/g)</u>				
2.48	0.57		GAMMA	83KIM 01	0.169	0.014	11	AS	85YAM 02
					0.202	0.039		AS	84GLA 02
<u>Am-241 (pCi/g)</u>					0.207	0.014	11	AS	85YAM 02
0.024			GAMMA	86GAU 01	0.212	0.011	11	AS	85YAM 02
0.035	0.004		RAS	85GAU 04	0.218	0.014	11	AS	85YAM 02
0.04	0.004		RAS	84GLA 11	0.22	0.02		RAS	86GAU 01
0.042	0.008		AS	84GLA 02	0.22	0.02		RAS	84GLA 11
<u>Cs-137 (pCi/g)</u>					0.221	0.017	11	AS	85YAM 02
0.48	0.04		GAMMA	86GAU 01	<u>Ra-226 (pCi/g)</u>				
0.52	0.06		GAMMA	84GLA 02	1.03	0.16		GAMMA	83KIM 01
0.56	0.05		GAMMA	85GAU 04	<u>Th-228 (pCi/g)</u>				
0.67	0.1		GAMMA	84GLA 11	1.97	0.04		AS	85JOS 01
<u>K-40 (pCi/g)</u>					<u>Th-230 (pCi/g)</u>				
25			GAMMA	86GAU 01	0.88	0.05		AS	85JOS 01
<u>Pu-238 (pCi/g)</u>					1.2			AS	84GLA 02
<	0.01		RAS	86GAU 01	<u>Th-232 (pCi/g)</u>				
0.0035	0.0019		AS	84GLA 02	1.93	0.08		AS	85JOS 01
0.004	0.002		RAS	84GLA 11	<u>U (ug/g)</u>				
					3.04	0.07		DNA	85GAU 04
					<u>U-238 (pCi/g)</u>				
					1.45	0.49		GAMMA	83KIM 01

TABLE 4355-1: COMPILED DATA FOR NBS SRM 4355 ENVIRONMENTAL RADIOACTIVITY - PERUVIAN SOIL (revised 3/1/86)
(Activity as of 1 June 1982)

ELEMENT	UNITS	NBS		CONSENSUS	METHOD
		Mean \pm	SD	Mean (n)	
Ag	ug/g	1.9		---	---
Al	%	8.19 \pm	0.28	---	---
Am-241	mBq/g	0.004 \pm	0.001	---	---
Am-241	pCi/g	0.0001		---	---
As	ug/g	93.9 \pm	7.5	---	---
B	ug/g	63		---	---
Ba	ug/g	561 \pm	53	---	---
Be	ug/g	1.77 \pm	0.27	---	---
Bi	ug/g	12		---	---
Bi-214	mBq/g	40		---	---
Bi-214	pCi/g	1.2		---	---
Br	ug/g	5.4 \pm	1.0	---	---
Ca	%	2.2		---	---
Cd	ug/g	1.5		---	---
Ce	ug/g	59.3 \pm	3.0	---	---
Co	ug/g	14.8 \pm	0.76	---	---
Co-60	mBq/g	< 0.016		---	---
Co-60	pCi/g	< 0.0004		---	---
Cr	ug/g	28.9 \pm	2.8	---	---
Cs	ug/g	56.7 \pm	3.3	---	---
Cs-137	mBq/g	0.33 \pm	0.04	---	---
Cs-137	pCi/g	0.0090 \pm	0.0011	---	---
Cu	ug/g	77.1 \pm	4.7	---	---
Dy	ug/g	4 \pm	1	---	---
Eu	ug/g	1.18 \pm	0.08	---	---
Eu-152	mBq/g	< 0.23		---	---
Eu-152	pCi/g	< 0.0063		---	---
Eu-154	mBq/g	< 0.2		---	---
Eu-154	pCi/g	< 0.006		---	---
Eu-155	mBq/g	< 0.2		---	---
Eu-155	pCi/g	< 0.006		---	---
F	ug/g	682		---	---
Fe	%	4.45 \pm	0.19	---	---
Fe-55	mBq/g	2.0		---	---
Fe-55	pCi/g	0.05		---	---
Ga	ug/g	18.4 \pm	1.6	---	---
Gd	ug/g	35		---	---
Hf	ug/g	6.3 \pm	0.3	---	---
Hg	ug/g	0.79		---	---
Ho	ug/g	0.82		---	---
K	%	1.86 \pm	0.15	---	---
K-40	mBq/g	585		---	---
K-40	pCi/g	16		---	---
La	ug/g	28.1 \pm	1.5	---	---
Li	ug/g	52 \pm	33	---	---
Lu	ng/g	336 \pm	44	---	---

TABLE 4355-1: COMPILED DATA FOR NBS SRM 4355 ENVIRONMENTAL RADIOACTIVITY - PERUVIAN SOIL (cont.)

ELEMENT	UNITS	NBS		CONSENSUS	METHOD
		Mean \pm	SD	Mean (n)	
Mg	%	1.5		---	---
Mg	ug/g	852 \pm 37		---	---
Mo	ug/g	1.7		---	---
Na	%	1.92 \pm 0.11		---	---
Nb	ug/g	9		---	---
Nd	ug/g	29.9 \pm 1.6		---	---
Ni	ug/g	13		---	---
P	ug/g	1100		---	---
Pb	ug/g	129 \pm 26		---	---
Pr	ug/g	5		---	---
Pu-238	mBq/g	0.003		---	---
Pu-238	pCi/g	< 0.0001		---	---
Pu-239	mBq/g	0.0076 \pm 0.0021		---	---
Pu-239	pCi/g	0.0002 \pm 0.0001		---	---
Rb	ug/g	138 \pm 7.4		---	---
Sb	ug/g	14.3 \pm 2.2		---	---
Sb-125	mBq/g	< 0.14		---	---
Sb-125	pCi/g	< 0.0038		---	---
Sc	ug/g	14.8 \pm 0.66		---	---
Se	ug/g	1.4		---	---
Si	%	33		---	---
Sm	ug/g	5.42 \pm 0.39		---	---
Sr	ug/g	330		---	---
Sr-90	mBq/g	0.22		---	---
Sr-90	pCi/g	0.006		---	---
Ta	ng/g	764 \pm 56		---	---
Tb	ng/g	665 \pm 75		---	---
Th	ug/g	11.3 \pm 0.73		---	---
Th-228	mBq/g	42.2 \pm 2.1		---	---
Th-228	pCi/g	1.15 \pm 0.06		1.17 (1)	AS
Th-230	mBq/g	39.7 \pm 2		---	---
Th-230	pCi/g	1.08 \pm 0.06		0.99 (1)	AS
Th-232	pCi/g	1.17 \pm 0.06		1.21 (1)	AS
Ti	ug/g	4700		---	---
Tl-208	mBq/g	12		---	---
Tl-208	pCi/g	0.33		---	---
Tm	ng/g	420		---	---
U	ug/g	3.04 \pm 0.51		2.82 (2)	NAA
V	ug/g	151		---	---
W	ug/g	5.1		---	---
Y	ug/g	21		---	---
Yb	ug/g	2.24 \pm 0.2		---	---
Zn	ug/g	368 \pm 8.2		---	---
Zr	ug/g	221		---	---

TABLE 4355-2: INDIVIDUAL DATA FOR NBS SRM 4355 (revised 3/1/86)

Conc	Uncer	Com	Method	Reference	Conc	Uncer	Com	Method	Reference
<u>Th-228 (pCi/g)</u>					<u>Th-232 (pCi/g)</u>				
1.17	0.03		AS	85JOS 01	1.21	0.06		AS	85JOS 01
<u>Th-230 (pCi/g)</u>					<u>U (ug/g)</u>				
0.99	0.05		AS	85JOS 01	2.75	0.09		DNA	85GAU 04
					2.88	0.05		DNA	85GLA 04

TABLE 8412-1: COMPILED DATA FOR NBS RMs 8412 and 8413 CORN STALK AND KERNEL (revised 3/1/87)

ELEMENT	UNITS	NBS	
		8412	8413
		Mean \pm SD	Mean \pm SD
Al	ug/g	---	4 \pm 2
Ca	ug/g	2160 \pm 80	42 \pm 5
Cl	ug/g	2440 \pm 140	450 \pm 120
Cu	ug/g	8 \pm 1	3.0 \pm 0.6
F	ng/g	650 \pm 130	240 \pm 20
Fe	ug/g	139 \pm 15	23 \pm 5
K	%	1.735 \pm 0.047	3570 \pm 370
Mg	ug/g	1600 \pm 70	990 \pm 82
Mn	ug/g	15 \pm 2	4.0 \pm 0.3
H	%	0.697 \pm 0.032	1.375 \pm 0.043
Na	ug/g	28 \pm 8	---
Se	ng/g	16 \pm 8	4 \pm 2
Sr	ug/g	12 \pm 2	---
Zn	ug/g	32 \pm 3	15.7 \pm 1.4

TABLE 8030-1: COMPILED DATA FOR NBS RM 8030 TRACE ELEMENTS IN AN AQUATIC PLANT LAGAROSIPHON MAJOR (revised 8/1/87)
Community Bureau of Reference BCR No. 60

Element	Units	NBS	
		Mean \pm	SD
Ag	ng/g	200	
Al	ug/g	6140	
As	ug/g	8	
Au	ng/g	20	
B	ug/g	25	
Br	ug/g	20	
Ca	%	3.10	
Cd	ug/g	2.20 \pm 0.10	
Ce	ug/g	4	
Cl	%	1.0	
Co	ug/g	4	
Cr	ug/g	26	
Cs	ng/g	400	
Cu	ug/g	51.2 \pm 1.9	
Eu	ng/g	170	
F	ug/g	24	
Fe	ug/g	2380	
Hg	ng/g	340 \pm 40	
K	%	1.14	
La	ug/g	2	
Mg	ug/g	6030	
Mn	ug/g	1759 \pm 51	
Mo	ug/g	2	
N	%	4.12	
Na	ug/g	6700	
Ni	ug/g	40	
P	ug/g	5140	
Pb	ug/g	63.8 \pm 3.2	
Rb	ug/g	23	
S	ug/g	5200	
Sb	ng/g	400	
Sc	ng/g	500	
Se	ng/g	700	
Si	%	2.85	
Sn	ug/g	6	
Ta	ng/g	100	
Tb	ng/g	100	
Ti	ug/g	240	
Tl	ng/g	240	
U	ng/g	300	
V	ug/g	6	
W	ug/g	20	
Zn	ug/g	313 \pm 8	

TABLE 8031-1: COMPILED DATA FOR NBS RM 8031 TRACE ELEMENTS IN AN AQUATIC MOSS PLATIHYPNIDIUM RIPARIOIDES
(revised 8/1/87)

Community Bureau of Reference BCR No. 61

Element	Units	NBS	
		Mean \pm	SD
Ag	ug/g	2	
Al	%	1.71	
As	ug/g	7	
Au	ng/g	220	
B	ug/g	77	
Br	ug/g	22	
Ca	%	1.70	
Cd	ug/g	1.07 \pm 0.08	
Ce	ug/g	12	
Cl	ug/g	2300	
Co	ug/g	43	
Cr	ug/g	532	
Cs	ng/g	600	
Cu	ug/g	720 \pm 31	
Eu	ng/g	200	
F	ug/g	60	
Fe	%	0.93	
Hg	ng/g	230 \pm 20	
K	%	1.24	
La	ug/g	5	
Mg	ug/g	3900	
Mn	ug/g	3771 \pm 78	
Mo	ug/g	11	
N	%	3.35	
Na	ug/g	3000	
Ni	ug/g	420	
P	%	0.92	
Pb	ug/g	64.4 \pm 3.5	
Rb	ug/g	32	
S	ug/g	2300	
Sb	ug/g	1	
Sc	ug/g	1	
Se	ug/g	1	
Si	%	7.52	
Sn	ug/g	13	
Ta	ng/g	500	
Tb	ng/g	200	
Ti	ug/g	780	
Tl	ng/g	130	
U	ng/g	260	
V	ug/g	6	
W	ug/g	239	
Zn	ug/g	566 \pm 13	

TABLE 8032-1: COMPILED DATA FOR NBS RM 8032 TRACE ELEMENTS IN A CALCAREOUS LOAM SOIL (revised 8/1/87)
Community Bureau of Reference BCR No. 141

Element	Units	NBS	
		Mean \pm	SD
Al	%	5.59	
As	ug/g	8	
Ba	ug/g	243	
Br	ug/g	3.5	
Ca	%	12.86	
Cd	ng/g	360 \pm 100	
Ce	ug/g	81	
Cu	ug/g	32.6 \pm 1.4	
Eu	ug/g	0.9	
Fe	%	2.61	
Ga	ug/g	14	
Hf	ug/g	3.7	
Hg	ng/g	56.8 \pm 4.3	
K	%	1.29	
La	ug/g	27	
LOI	%	20.65	
Mg	ug/g	7180	
Na	ug/g	3200	
Nb	ug/g	10	
P	ug/g	700	
Pb	ug/g	29.4 \pm 2.6	
Rb	ug/g	95	
Sb	ng/g	600	
Sc	ug/g	8.4	
Si	%	19.88	
Sm	ug/g	6.3	
Sn	ug/g	4.0	
Sr	ng/g	460	
Th	ug/g	10.3	
Ti	ug/g	2800	
W	ug/g	1.4	
Y	ug/g	24	
Yb	ug/g	2.1	
Zn	ug/g	81.3 \pm 3.7	
Zr	ug/g	120	

TABLE 8033-1: COMPILED DATA FOR NBS RM 8033 TRACE ELEMENTS IN A LIGHT SANDY SOIL (revised 8/1/87)
Community Bureau of Reference BCR No. 142

Element	Units	NBS
		Mean \pm SD
Al	%	5.01
As	ug/g	16
Ba	ug/g	450
Br	ug/g	6
Ca	%	3.53
Cd	ng/g	250 \pm 90
Ce	ug/g	80
Cu	ug/g	27.5 \pm 0.6
Dy	ug/g	5.15
Er	ug/g	2.84
Eu	ug/g	1.0
Fe	%	1.96
Ga	ug/g	11
Gd	ug/g	5.7
Hf	ug/g	12
Hg	ng/g	104 \pm 12.3
K	%	2.00
La	ug/g	32
Lu	ng/g	410
Mg	ug/g	6570
Na	ug/g	7200
Nb	ug/g	14
Nd	ug/g	28
Ni	ug/g	29.2 \pm 2.5
P	ug/g	960
Pb	ug/g	37.8 \pm 1.9
Rb	ug/g	105
Sb	ug/g	2.5
Sc	ug/g	8.2
Si	%	31.86
Sm	ug/g	6.8
Sn	ug/g	4
Sr	ug/g	164
Th	ug/g	11.9
Ti	ug/g	3700
W	ug/g	1.2
Y	ug/g	30.4
Yb	ug/g	2.77
Zn	ug/g	92.4 \pm 4.4
Zr	ug/g	390

TABLE 8034-1: COMPILED DATA FOR NBS RM 8034 TRACE ELEMENTS IN A SEWAGE SLUDGE (revised 8/1/87)
Community Bureau of Reference BCR No. 144

Element	Units	NBS	
		Mean \pm	SD
Ag	ug/g	13	
Al	%	2.42	
As	ug/g	6.7	
Au	ug/g	1	
B	ug/g	61	
Be	ng/g	660	
Bi	ug/g	16	
Br	ug/g	9	
Ca	%	4.06	
Cd	ug/g	3.41 \pm 0.25	
Ce	ug/g	14	
Co	ug/g	9.06 \pm 0.60	
Cu	ug/g	713 \pm 26	
Fe	%	4.43	
Ga	ug/g	5	
Hg	ug/g	1.49 \pm 0.22	
K	ug/g	6500	
Mg	ug/g	5500	
Mn	ug/g	449 \pm 13	
Mo	ug/g	4	
Na	ug/g	3400	
Nb	ug/g	3	
Ni	ug/g	942 \pm 22	
P	%	2.21	
Pb	ug/g	495 \pm 19	
Rb	ug/g	14	
Sc	ug/g	1.5	
Si	%	6.37	
Sn	ug/g	98	
Ti	ug/g	1140	
Tl	ng/g	490	
V	ug/g	14	
W	ug/g	7	
Y	ug/g	5	
Zn	ug/g	3143 \pm 103	
Zr	ug/g	56	

TABLE 8035-1: COMPILED DATA FOR NBS RM 8035 TRACE ELEMENTS IN A SEWAGE SLUDGE OF MAINLY INDUSTRIAL ORIGIN
(revised 8/1/87)

Community Bureau of Reference BCR No. 146

Element	Units	NBS	
		Mean \pm	SD
Ag	ug/g	203	
Al	%	4.76	
As	ug/g	5.1	
Au	ug/g	3.6	
B	ug/g	50	
Be	ug/g	5.4	
Br	ug/g	6	
Ca	%	10.2	
Cd	ug/g	77.7 \pm 2.6	
Ce	ug/g	100	
Co	ug/g	11.8 \pm 0.7	
Cu	ug/g	934 \pm 24	
Fe	%	1.85	
Ga	ug/g	6	
Hg	ug/g	9.49 \pm 0.76	
K	ug/g	4800	
La	ug/g	14	
LOI	%	37.7	
Mg	%	2.0	
Mn	ug/g	588 \pm 24	
Mo	ug/g	10	
Na	ug/g	2200	
Nb	ug/g	15	
Ni	ug/g	280 \pm 18	
P	%	2.57	
Pb	ug/g	1270 \pm 28	
Rb	ug/g	27	
Sc	ug/g	2.4	
Si	%	10.6	
Ti	%	1.74	
Tl	ug/g	1.2	
V	ug/g	35	
W	ug/g	6	
Zn	ug/g	4059 \pm 90	
Zr	ug/g	9	

TABLE 8036-1: COMPILED DATA FOR NBS RM 8036 TRACE ELEMENTS IN A SPIKED SKIM MILK POWDER (revised 8/1/87)
Community Bureau of Reference BCR No. 150

Element	Units	NBS	
		Mean \pm	SD
Cd	ng/g	21.8 \pm	1.4
Co	ng/g	6.4	
Cu	ug/g	2.23 \pm	0.08
Fe	ug/g	11.8 \pm	0.6
Hg	ng/g	9.4 \pm	1.7
I	ug/g	1.29 \pm	0.09
Mn	ng/g	236	
Ni	ng/g	61.5	
Pb	ug/g	1.00 \pm	0.04
Se	ng/g	127	
Tl	ng/g	1.0	
Zn	ug/g	49.4	

TABLE 8431-1: COMPILED DATA FOR NBS RM 8431 MIXED DIET (revised 3/1/87)

ELEMENT	UNITS	NBS
		Mean \pm SD
Al	ug/g	4.39 \pm 1.07
As	ug/g	0.92 \pm 0.34
Ca	ug/g	1940 \pm 140
Cd	ng/g	42 \pm 11
Co	ng/g	38 \pm 8
Cr	ng/g	102 \pm 6
Cu	ug/g	3.36 \pm 0.33
Fe	ug/g	37.0 \pm 2.6
K	ug/g	7900 \pm 4200
Mg	ug/g	650 \pm 40
Mn	ug/g	8.12 \pm 0.31
Mo	ng/g	288 \pm 29
Na	ug/g	3120 \pm 160
Ni	ng/g	644 \pm 151
P	ug/g	3320 \pm 310
Se	ng/g	242 \pm 30
Zn	ug/g	17.0 \pm 0.6
ASH	%	3.00 \pm 0.09
Calorie	Cal/100 g	436
Fat	%	9.5 \pm 0.92
Fructose	%	5.8
Glucose	%	6.5
Lactose	%	3.7
Maltose	%	1.8
Phytate	mg/g	2.10
Protein	%	19.1 \pm 0.6
Starch	%	24.6 \pm 5.0
Sucrose	%	11.1
Total Sugar	%	28.3 \pm 1.7
Total Fiber	%	5.3

Appendix

References for NBS SRM Collected Data

CODE N	REFERENCE	CODE N	REFERENCE
55COL D1	M. E. Coller and R. K. Leininger (1955) Determination of Total Sulfur Content of Sedimentary Rocks by a Combustion Method, <i>Analytical Chemistry</i> , 27: 949-951.	69COM 01	W. Compston, B. Chappell, P. Arriens, and M. Vernon (1969) On the Feasibility of NBS 7DA K-feldspar as a Rb-Sr Age Reference Sample, <i>Geochimica et Cosmochimica Acta</i> , 33: 753.
57SHI D1	M. F. Shimp, J. Connor, A. Prince, and F. Bear (1957) Spectrochemical Analysis of Soils and Biological Materials, <i>Soil Science</i> , 83: 51-64.	69EDM 01	C. R. Edmond (1969) Direct Determination of Fluoride in Phosphate Rock Samples, Using the Specific Ion Electrode, <i>Analytical Chemistry</i> , 41: 1327-1328.
58GRA D1	R. J. Grabowski and R. C. Unice (1958) Quantitative Spectrochemical Determination of Barium and Strontium, <i>Analytical Chemistry</i> , 30: 1374-1379.	69LAE D1	J. R. de Laeter, I. D. Aberchrombie, and R. Date (1969) Mass Spectrometric Isotope Dilution Analyses of Barium in Standard Rocks, <i>Earth and Planetary Science Letters</i> , 7: 64.
58WAT D1	H. L. Watts (1958) Volumetric Determination of Aluminium in the Presence of Iron, Titanium, Calcium, Silicon, and other Impurities, <i>Analytical Chemistry</i> , 30: 967-970.	69THI 01	G. Thielicke (1969) Titrimetrische Bestimmung des Aluminiums in Silicatgesteinen mit Potentiometrischer Indikation, <i>Fresenius Zeitschrift fur Analytische Chemie</i> , 246: 118-122.
59COL D1	P. F. Collins, H. Diehl, and G. F. Smith (1959) Determination of Iron in Limestone, Silicates, and Refractories, <i>Analytical Chemistry</i> , 31: 1862-1867.	69WIC 01	R. Wickbold (1969) Extraktion des Eisens mit Methylisobutylketon und seine Titration im Extrakt mit ADTA, <i>Fresenius Zeitschrift fur Analytische Chemie</i> , 244: 372-375.
61TUR 01	K. K. Turekian and M. H. Carr (1961) Chromium, Cobalt, and Strontium in some Bureau of Standards Rock Reference Samples, <i>Geochimica et Cosmochimica Acta</i> , 24: 1-9.	70ING 01	B. L. Ingram (1970) Determination of Fluoride in Silicate Rocks Without Separation of Aluminium using a Specific Ion Electrode, <i>Analytical Chemistry</i> , 42: 1825-1827.
62JOE 01	O. I. Joensuu and W. H. Suhr (1962) Spectrochemical Analysis of Rocks, Minerals, and Related Materials, <i>Applied Spectroscopy</i> , 16: 101-104.	70LAE D1	J. R. de Laeter and I. D. Aberchrombie (1970) Mass Spectrometric Isotope Dilution Analyses of Rubidium and Strontium in Standard Rocks, <i>Earth and Planetary Science Letters</i> , 9: 327-330.
63CLA 01	M. C. Clark and D. J. Swaine (1963) Trace Element Contents of the National Bureau of Standards Reference Samples Numbers 1A, 98, and 99, <i>Geochimica et Cosmochimica Acta</i> , 27: 1139-1142.	71FAB D1	B. P. Fabbi (1971) Rapid X-ray Fluorescence Determination of Phosphorus in Geological Samples, <i>Applied Spectroscopy</i> , 25: 41-43.
63KOR D1	J. Korkisch, G. Arrhenius, and D. P. Kharkar (1963) Spectrophotometric Determination of Titanium After Separation by Anion Exchange, <i>Analytica Chimica Acta</i> , 28: 270-277.	71HEI 02	R. H. Heidel (1971) Precision and Detection Limits of Certain Minor and Trace Elements in Silicates by Electron Microprobe Analysis, <i>Analytical Chemistry</i> , 43: 1907-1908.
64FIL 01	R. H. Filby (1964) The Contents of Several Trace Elements in Some Standard Rock Samples, <i>Geochimica et Cosmochimica Acta</i> , 28: 265-269.	71PET D1	M. A. Peters and D. M. Ladd (1971) Determination of Fluoride in Oxides with the Fluoride-ion Activity Electrode, <i>Talanta</i> , 18: 655-664.
65BAL 01	T. K. Ball and R. H. Filby (1965) The Zinc Contents of Some Geochemical Standards by Neutron Activation and X-ray Fluorescence Analysis, <i>Geochimica et Cosmochimica Acta</i> , 29: 737-740.	72ALL 01	W. J. F. Allen (1972) The Determination of Rubidium and Caesium in Geological Materials by Atomic Emission Spectrophotometry with a Nitrous Oxide-Acetylene Flame, <i>Analytica Chimica Acta</i> , 59: 111-117.
65MTA 01	Proceedings of the 1965 International Conference on Modern Trends in Activation Analysis, College Station, Texas.	72ARU D1	P. J. Aruscavage and H. T. Millard (1972) A Neutron Activation Procedure for the Determination of Uranium, Thorium, and Potassium in Geological Samples, <i>Journal of Radioanalytical Chemistry</i> , 11: 67-84.
65WAH 01	W. H. Wahl, V. J. Molinski, and H. Arino (1965) Rapid Radiochemical Separation Procedures for Activation Analysis Indicators, in 65MTA 01, pp. 44-47.	72ASH D1	D. G. Ashley and K. W. Andrews (1972) Analysis of Aluminosilicate Materials by X-ray Fluorescence Spectrometry, <i>Analyst</i> , 97: 841-845.
65WEL D1	M. Wells (1965) Selenium Content of Soil-Forming Rocks, <i>New Zealand Journal of Geology and Geophysics</i> , 10: 198-208; taken from 74CRE 01.	72AVN 01	R. Avni, A. Harel, and I. B. Brenner (1972) A New Approach to the Spectrochemical Analysis of Silicate Rocks and Minerals, <i>Applied Spectroscopy</i> , 26: 641-645.
66HAM 01	E. I. Hamilton (1966) The Uranium Content of Some International Standards, <i>Earth and Planetary Science Letters</i> , 1: 317-318.	72BEC D3	D. A. Becker and P. D. LaFleur (1972) Determination of Trace Quantities of Uranium in Biological Materials by Neutron Activation Analysis using a Rapid Radiochemical Separation, <i>Analytical Chemistry</i> , 44: 1508.
67KOD 01	H. Kodama, J. E. Brydon, and B. C. Stone (1967) X-ray Spectrochemical Analysis of Silicates using Synthetic Standards with a Correction of Interelemental Effects by a Computer Method, <i>Geochimica et Cosmochimica Acta</i> , 31: 649-659.		

CODE	N	REFERENCE
72BOU	01	J. L. Bouvier, J. G. Sen Gupta, and S. Abbey (1972) Title Unknown, Geological Survey of Canada paper 72-31, p. 22; taken from 77LAN 01.
72BOW	D1	H. J. M. Bowen (1972) The Determination of Tin in Biological Material by using Neutron Activation Analysis, <i>Analyst</i> , 97: 1DD3-1DD5.
72BYR	01	A. R. Byrne (1972) The Toluene Extraction of Some Elements as Iodides from Sulfuric Acid-Potassium Iodide Media: Application to Neutron Activation Analysis, <i>Analytica Chimica Acta</i> , 59: 91-99.
72CAR	01	B. S. Carpenter (1972) Determination of Trace Concentration of Boron and Uranium in Glass by Nuclear Track Technique, <i>Analytical Chemistry</i> , 44: 600-602.
72DAM	01	D. Damsgaard, K. Heydorn, and B. Rietz (1972) Determination of Vanadium in Biological Materials by Neutron Activation Analysis, in 72IAE 01, pp. 119-13D.
72GIB	01	D. Gibbons, M. Perkins, and T. W. Sanders (1972) Determination of Lead in Biological Materials by Neutron Activation Analysis, in 72IAE 01, pp. 131-138.
72HEI	D1	M. W. Heitzman and R. E. Simpson (1972) Neutron Activation Analysis of Mercury in Fish, Flour, and Standard Reference Orchard Leaves by Electrodeposition Radiochemistry, <i>Journal of the Association of Official Analytical Chemists</i> , 55: 96D-965.
72IAE	D1	International Atomic Energy Agency (1972) Nuclear Activation Techniques in the Life Sciences, Proceedings of a Symposium held in Bled, Yugoslavia, STI/PUB/310.
72JON	D3	J. B. Jones and R. A. Issac (1972) Determination of Sulfur in Plant Material using a LECO Sulfur Analyzer, <i>Journal of Agricultural and Food Chemistry</i> , 20: 1292-1294.
72LEV	01	M. Levstek, L. Kosta, M. Dermelj, and A. R. Byrne (1972) Vanadium Determination in Biological Materials by the use of Preconcentration, in 72IAE 01, pp. 111-116.
72LYO	01	W. S. Lyon, L. C. Bate, and J. F. Emery (1972) Environmental Pollution: Use of Neutron Activation Analysis to Determine the Fate of Trace Elements from Fossil Fuel Combustion in the Ecological Cycle, in 72IAE 01, pp. 253-261.
72MAG	01	C. W. Magee, D. L. Donohur, and W. W. Harrison (1972) Advantages of Dual Electrode Mounts in Spark Source Mass Spectrometry using Electrical Detection, <i>Analytical Chemistry</i> , 44: 2413-2415.
72MAI	D1	E. J. Maienthal (1972) Analysis of Botanical Standard Reference Materials by Cathode Ray Polarography, <i>Journal of the Association of Official Analytical Chemists</i> , 55: 1109-1113.
72MOR	D3	G. H. Morrison and W. M. Potter (1972) Multielement Neutron Activation Analysis of Biological Material using Chemical Group Separations and High Resolution Gamma-ray Spectrometry, <i>Analytical Chemistry</i> , 44: 839-842.
72RAI	01	T. C. Rains and O. Menis (1972) Determination of Submicrogram Amounts of Mercury in Standard Reference Materials by Flameless Atomic Absorption Spectrometry, <i>Journal of the Association of Official Analytical Chemists</i> , 55: 1339-1344.

CODE	N	REFERENCE
72ROO	D1	H. L. Rook, P. D. LaFleur, and T. E. Gills (1972) Mercury in Coal: A New Standard Reference Material, <i>Environmental Letters</i> , 2: 195-2D4.
72ROO	02	H. L. Rook, T. E. Gills, and P. D. LaFleur (1972) Method for Determination of Mercury in Biological Materials by Neutron Activation Analysis, <i>Analytical Chemistry</i> , 44: 1114-1117.
72ROO	03	H. L. Rook (1972) Rapid, Quantitative Separation for the Determination of Selenium using Neutron Activation, <i>Analytical Chemistry</i> , 44: 1276-1278.
72ROS	D2	J. N. Rosholt (1972) Private Communication; taken from 72ARU 01.
72SAN	D1	P. M. Santoliquido and R. R. Ruch (1972) Rapid Radiochemical Separation and Determination of Gallium in Coal Ash, <i>Radiochemical and Radioanalytical Letters</i> , 12: 71-76.
72SEI	01	W. R. Seitz and D. M. Hercules (1972) Determination of Trace Amounts of Iron(II) using Chemiluminescence Analysis, <i>Analytical Chemistry</i> , 44: 2143-2148.
72SIN	D1	I. Sinko and L. Kosta (1972) Determination of Lead, Cadmium, Copper, and Zinc in Biological Materials by Anodic Stripping Polarography, <i>International Journal of Environmental Analytical Chemistry</i> , 2: 167-178.
73ABE	01	K. H. Abel and L. A. Rancitelli (1973) Major, Minor, and Trace Element Composition of Coal and Fly Ash, as Determined by Instrumental Neutron Activation Analysis, in 73BAB D1, pp. 118-138.
73BAB	D1	S. P. Babu, editor (1973) Trace Elements in Fuel, <i>Advances in Chemistry Series 141</i> , American Chemical Society, Washington, D. C.
73BAR	D1	I. L. Barnes, E. Garner, J. Gramlich, L. Moore, T. Murphy, L. Machlan, W. Shields, M. Tatsumoto, and R. Knight (1973), Determination of Lead, Uranium, Thorium, and Thallium in Silicate Glass Standard Materials by Isotope Dilution Mass Spectrometry, <i>Analytical Chemistry</i> , 45: 88D-885.
73BES	D1	Y. Besnus and R. Rouault (1973) Une Methode D'Analyse des Roches au Spectrometre D'Arc a Lecture Directe par un Dispositif D'Electrode Rotative, <i>Analisis</i> , 2: 111-116.
73BLA	01	M. S. Black and R. E. Sievers (1973) Environmental Analysis Problems Created by Unexpected Volatile Beryllium Compounds in Various Samples, <i>Analytical Chemistry</i> , 45: 1773-1775.
73BLO	D2	A. J. Blotcky, L. J. Arsenault, and E. P. Rack (1973) Optimum Procedure for the Determination of Selenium in Biological Specimens using Se-77m Neutron Activation, <i>Analytical Chemistry</i> , 45: 1D56-1D6D.
73CAR	01	J. A. Carter, D. Matthews, R. Walker, and J. Walton (1973) Measurement of Nitrogen and Nitrogen Isotopic Ratios using Reduction Pyrolysis Coupled with Mass Spectrometry, <i>Analytical Letters</i> , 6: 951-96D.
73COR	01	R. Cornelis, A. Speecke, and J. Hoste (1973) A Multielement Serum Standard for Neutron Activation Analysis, <i>Analytica Chimica Acta</i> , 68: 1-1D.

CODE	N	REFERENCE
73DAM	01	E. Oamsgaard and K. Heydorn (1973) Arsenic in Standard Reference Material 1571 (Orchard Leaves) Presented at the Third Symposium on the Recent Developments in Neutron Activation, Cambridge; also in Danish Atomic Energy Commission report RISØ-M-1633.
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